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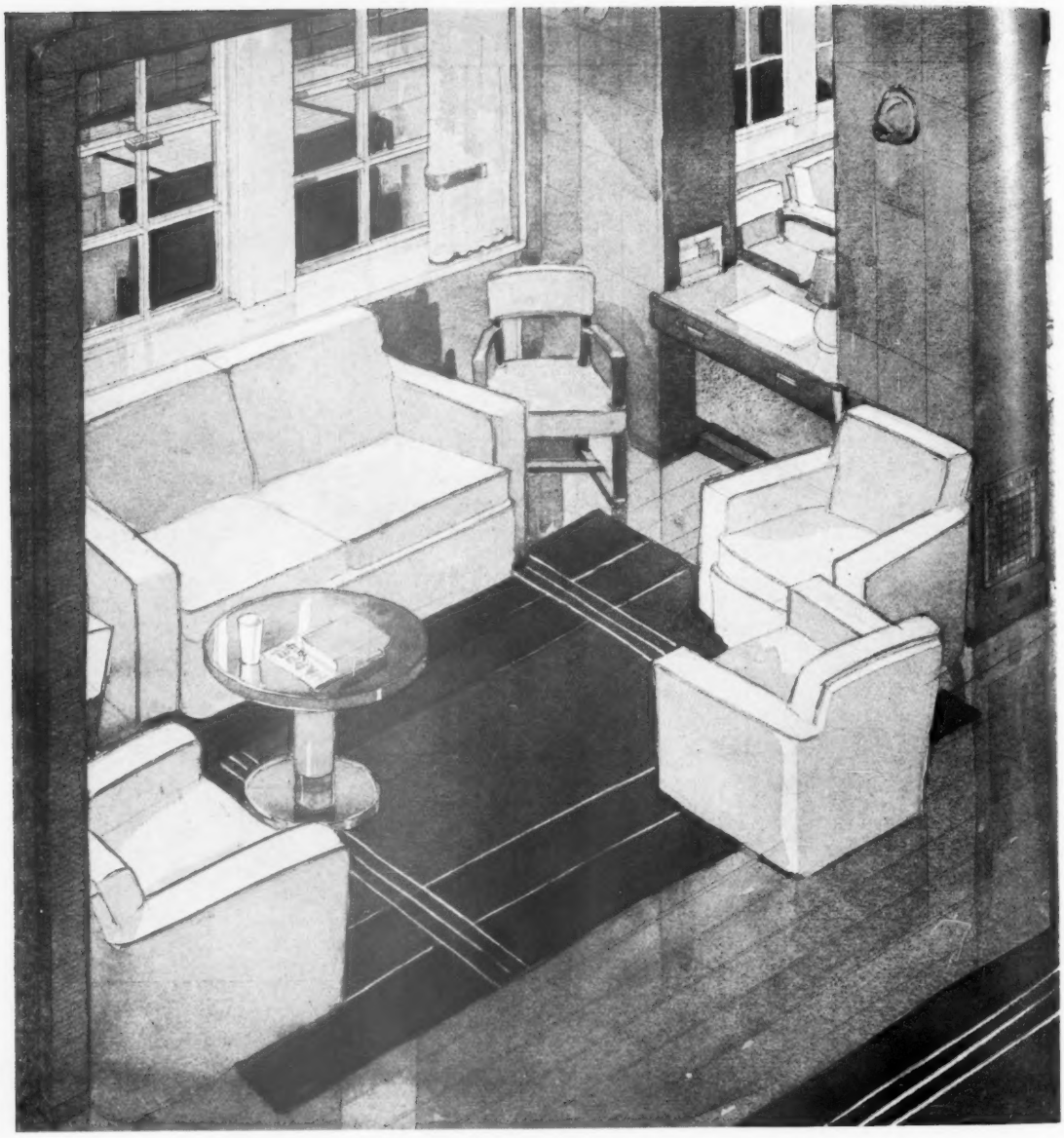

SKETCH FOR DECORATION AND FURNISHING OF R.M.S. *Orion*. By BRIAN O'RORKE [*A.*]

One of Mr. O'Rorke's sketch suggestions for the interior decoration of *Orion*. He was responsible for the whole of the designing, including the furniture, fabrics and fittings, in the passenger quarters. (See pages 1106–9)

JOURNAL OF THE
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Journal

When the International Exhibition of Architecture was open at 66 Portland Place during the Centenary Celebrations the attendance of the public was considered to be satisfactory. Since last April the Exhibition has been on a tour of the provinces—so successful a tour, that ideas as to what constitutes a good attendance have had to be revised. In Manchester, Liverpool, and Hull, at each of which it was shown for a month, the attendances have totalled approximately 60,000. It is now on view at Bristol, and is going next to Leicester. That so many persons are willing to visit an exhibition of photographs is a most encouraging sign of public interest in modern architecture. In itself the Exhibition is not only performing useful educative work but is also a good means of propaganda for the profession.

The tour of this Exhibition clearly offers excellent opportunities to Allied Societies to help on the work of education as well as to enhance their own local standing. What has been done to help by the Bristol Society of Architects is worth recounting. The Bristol Society, at an early stage, offered their help to the Director of the Municipal Art Gallery, who had obtained the Exhibition. Their President, Mr. Mowbray A. Green [*F.*], was asked to take the chair when the Exhibition was opened on 26 August by Major-General Sir Fabian Ware (Hon. Associate). Members of the Society gave help in hanging the Exhibition, and were present at the Press view. They also took the initiative in suggesting that parties of children from the secondary and elementary schools should visit it, and offered their services as guides. That the Director of Education readily agreed to this suggestion is yet another encouraging sign of public interest. At the time of writing the Society is approaching the heads of other schools with the same suggestion.

Sir Fabian Ware, who is Chairman of the Gloucestershire Branch of the C.P.R.E., pointed the moral of the Exhibition in an opening speech which was widely reported in the local Press. He said that one of the main objects of the Exhibition was to impress on them that, to use a word which, by constant reiteration, had become hackneyed and repellent, they must "plan." The greatest sin of our generation, architecturally, had been the deliberate unplanning of what previous generations had planned. The stately harmony of terraces and rows of houses had been destroyed by the insertion of incongruous architecture, the skyline had been scarred by the erection of blocks of flats of haphazard height, amateur-designed villas and bungalows had blotted the ordered landscapes.

Of the destruction of the countryside, he could tell them nothing that they did not all know and unanimously deplore. But here, again, this Exhibition pointed the only way, straight and narrow, of salvation. Weary of the slow progress of the Ministry of Health in administering the Town and Country Planning Act of 1932, people had become disheartened. Some of them had hailed with relief the Ribbon Development Bill promoted by an energetic Minister of Transport. But the Act which had resulted was going to prove no short cut to victory. In this, as in other public issues, the success or failure of democracy was in the balance. The great landowners had gone; they had in the past generally been men of artistic taste or the patrons of men of taste. They were now replaced by elected democratic authorities; could these authorities be imbued collectively with artistic taste, or could they be persuaded or obliged to accept the advice of men of taste? The Town Planning Acts had provided the machinery of Advisory Panels for the purpose; it was at the present of all times unpatriotic of any local authority to refuse to use them.

Help is wanted in the preparation of the catalogue for the Exhibition of "Everyday Things," which is being organised by the R.I.B.A. Exhibitions Committee for the spring of 1936. The Centenary Exhibition set a very high standard both in the presentation of the exhibits and in the production of the catalogue. The 1936 catalogue will in its arrangement broadly follow the lines of the previous catalogue; it will, it is hoped, improve on it. A person is wanted, with a good eye for typography and page lay-out, who can help in the design and lay-out of the catalogue and who can help to read proofs. Any member who would like to give some of his time to this is asked to write to the Exhibition Secretary, c/o the R.I.B.A.

Members will join with us in congratulating Mr. W. T. Plume on the completion of fifty years' service on the staff of *The Builder*, during eighteen of which he has ably filled the post of editor. Mr. Plume's services to architecture and the architectural profession have long been recognised; he was elected an Honorary

Associate of the R.I.B.A. as long ago as 1921. His many personal friends in the profession will wish him many more years of successful leadership. *The Builder* was the pioneer weekly architectural journal and is approaching its centenary, which takes place in 1942. It owes much to Mr. Plume for the high standard of service which has for so long been maintained.

The interior decoration of ships is a branch of architecture that is growing in importance, the great steamship companies apparently finding more satisfaction in the work of architects than in that of decorating firms or of distinguished amateurs. Last month we were invited to join a one-day cruise, in company with representatives of the lay and technical Press, on the new Orient liner *Orion*, which has been decorated throughout by Mr. Brian O'Rorke [*A.*]. The word "decorated" is perhaps inadequate in this case, since not only has Mr. O'Rorke advised on the planning and functional equipment of the whole of the passenger quarters but, perhaps for the first time in the history of liners, he has given a ship-like character to the whole.

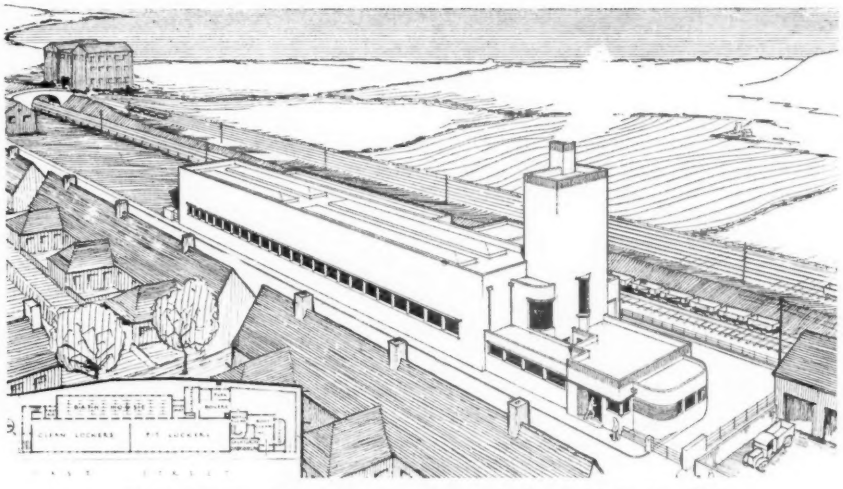
This represents a breaking away from the shipowner's tradition that the interiors of liners should remind passengers as little as possible that they are at sea. It has been the custom to line the public rooms with detail borrowed from static architecture and usually from any or all periods of it. One is reminded of Peter Arno's cartoon in which a couple are shown standing at the foot of a colossal Renaissance staircase, the caption below being, "This isn't a very homey ship." Latterly continental liners have "gone modern" (or "moderne"), but even then little attempt has been made to emphasise the ship-like character of the structural form. It should not from this be assumed that Mr. O'Rorke's decorations are uncomfortable either physically or sensationally. On the contrary they give one the feeling of being pleasantly secure from the storms and dangers that are only a few feet away; but the sensation of being in a ship is never lost. *Orion*, with a tonnage of 23,000, is not large, compared with the giants of the Atlantic service. She is to be used for the England to Australia mail service and consequently has been specially designed to give comfort in the tropics.

It is difficult to express by photograph or drawing the quality of Mr. O'Rorke's designs; the camera appears to darken interiors that are light in tone. Veneers of light woods, metal banding, carpets, upholstery and hangings in pale fawns, greens, blues and greys are the dominant materials and colours. Three characteristics stand out: simplicity in form and pattern; uniformity of quality and effect throughout the ship; thorough consideration of component details, even to such things as ash-trays.

Listening to after-dinner speeches and the remarks of individuals on the one-day cruise, one could not fail to observe the unanimous approval of Mr. O'Rorke's work, nor the tacit agreement as to the supremacy of the architect in all matters involving design. The latter fact is slowly penetrating to the consciousness of the general public and the recognition of it by the owners of *Orion* is a step forward. Mr. O'Rorke in a speech paid tribute to the vision of his clients and every architect knows that the best quality work is obtained only with clients who are knowledgeable and possess taste. These qualities in the managers of the Orient Line were apparent in the remarkably good descriptive brochures presented to the Press. One in particular, laid out and containing coloured drawings by Mr. Ceri Richards, was commended by Mr. James Bone, in speaking for the Press, as the best he had seen in a long lifetime. Finally, the admirable staff work produced the most pleasant and interesting "Press view" of the many that we have attended.

Below we publish a photograph of the new R.I.B.A. House Flag which was designed by Mr. Sydney Tatchell [*F.*], cartooned by Mr. Macdonald Gill [*F.*], and made by Messrs. J. W. Gray and Son, Ltd. The lions are in yellow on a red background, and the crown, column, and border are yellow and royal blue.

This flag was flown for the first time on Jubilee day.



Blackhall Colliery Baths, Durham. Drawing by J. W. M. Dudding [L.]

THE ARCHITECTURAL WORK OF THE MINERS' WELFARE COMMITTEE

CHIEF ARCHITECT: J. H. FORSHAW, M.C., M.A. [F.]

THE Miners' Welfare Fund exists, as its name implies, to raise the standards of working and living conditions in an industry hitherto notorious for its hardships. The Fund is administered by the Miners' Welfare Committee, under the Chairmanship of Major-General The Rt. Hon. Sir Frederick Sykes, P.C., G.C.S.I., with the assistance of District Committees in the colliery areas, and is used for the building of pithead baths, the provision of recreational facilities, the improvement of education (both general and mining) and in research into safety and health of mineworkers.

The Fund was first established in 1920 and is made up of a levy of ½d. per ton on the output of every coal mine (the Output Welfare Levy was instituted at 1d. per ton in 1921 and reduced to ½d. per ton in 1934), and a levy of 1s. for every £1 of royalties paid on the production of coal (the Royalties Welfare Levy instituted in 1926). The whole of the Royalties Levy is required by law to be expended upon providing pithead baths, together with a part of the output levy sufficient to make up £375,000 a year. This article is concerned with the architectural and technical problems of pithead baths.

ORGANISATION AND FINANCING

Collieries are provided with bath buildings at the joint request of the owners and mineworkers, a majority vote being required in the case of the latter. In many cases additional buildings such as canteens, cycle sheds, ambulance and lamp rooms are included in the baths scheme. With the exception of the lamp rooms, which are the property of the colliery and only included in the scheme for convenience, these additional buildings are usually paid for out of the Fund. Some of this ancillary accommodation will be noticed in the plans illustrating this article.

In almost all cases the baths are operated and maintained by weekly contributions from the workers. The owners, however, in many cases provide free steam, coal, or electricity, and in a few cases cash contributions. The men contribute sums varying from 2d. to 1s. per week, but at 87·5 per cent. of the installations the contribution is from 3d. to 6d. per week. The responsibility for maintaining the baths after completion is vested in trustees representing owners and workmen and a small Baths Management Committee administers the operation of the installation. It has been found that operating and maintenance costs per man are reduced as the size of installation increases. With some of the very small collieries difficulty arises owing to high upkeep costs, and attempts are being made to meet this difficulty by introducing certain modifications into the design which,

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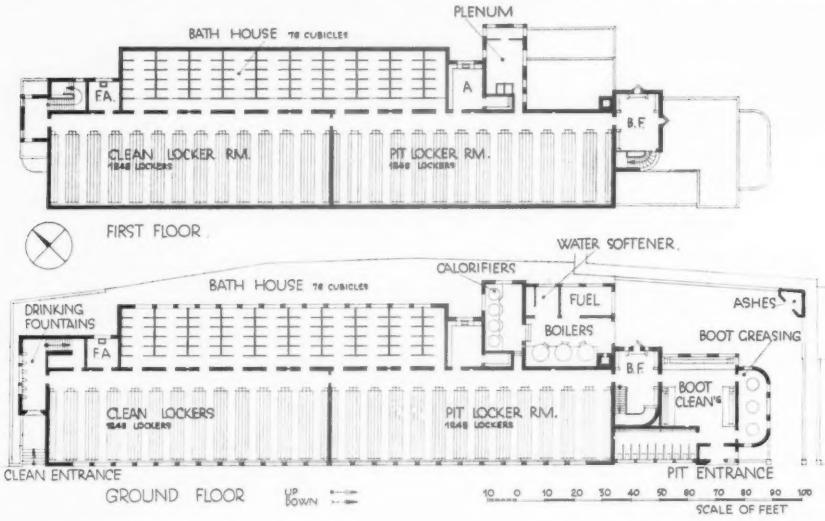
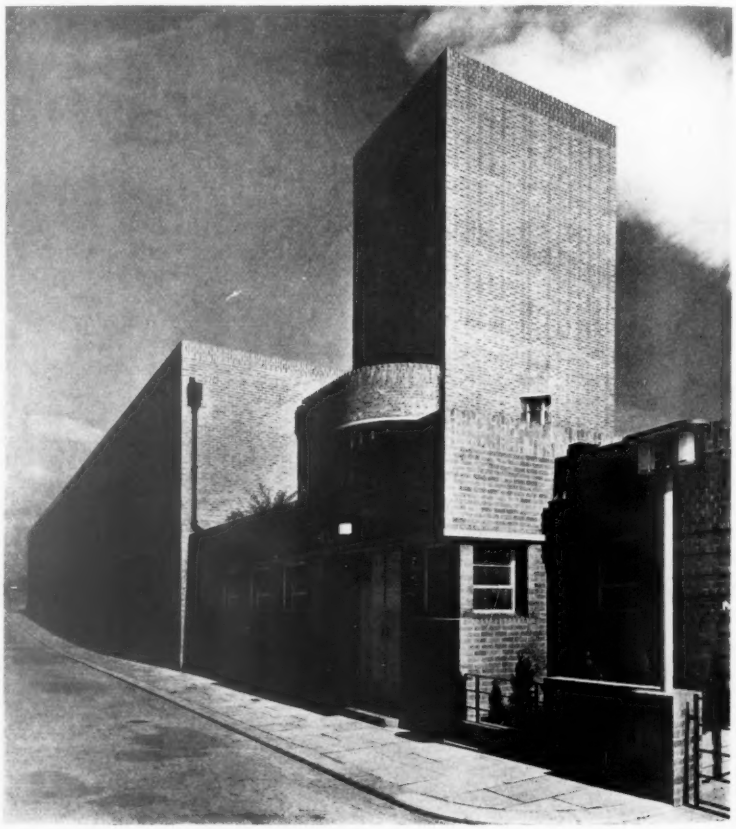


Key to plans: FA, First Aid; A, Attendant; BF, Bottle Filling; BG, Boot Greasing; K, Kitchen; AL, Air Lock; L, Lavatory; St, Store; Sw, Switches; D, Drying Racks; F, Fuel



View showing the pit entrance. The tower contains the staircase and tanks

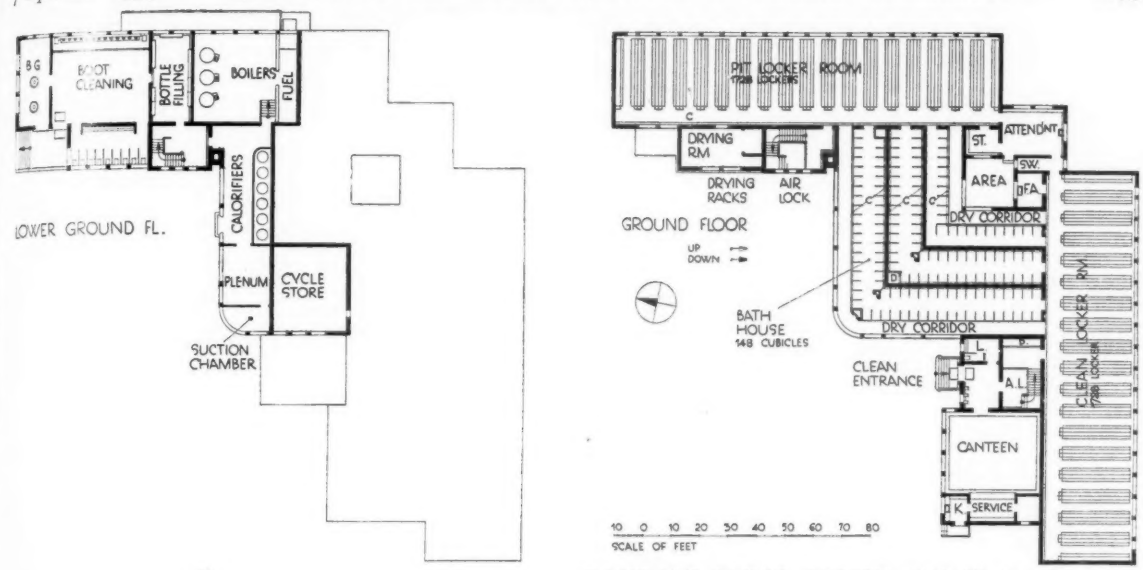
BLACKHALL COLLIERY BATHS, DURHAM

Architect: F. G. Frizzell [*A.*]

This is a fairly typical scheme of large size. The restricted site, between a road and railway, necessitated a large narrow building of two storeys. As in other two-floor schemes, the locker rooms and bath house are duplicated, with staircases at each entrance; the boot-cleaning, boot-greasing and bottle-filling rooms and lavatories are on the ground floor common to both sets of baths. The tower contains the water storage tanks and chimney. Unlike many schemes in which colliery steam is available for heating, this building has its own boiler installation.

The building was opened on 11 August 1934 and accommodates 2,496 men. The cost was £25,184 (including boiler and water softening plants), equivalent to £10 2s. per man accommodated.

An aerial perspective of this scheme is at the head of the article.

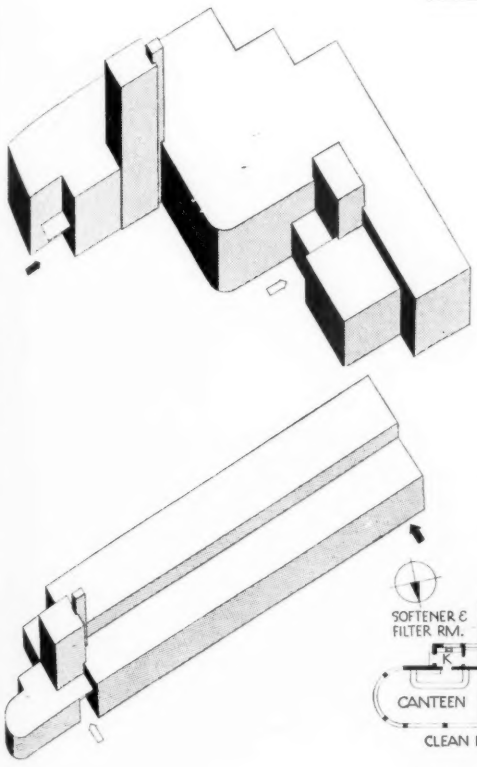


OAKDALE BATHS, SOUTH WALES *(above)*

Architect: W. M. Traylor [*L.*]

An unusual plan on a fine, though sloping, site. The ground was occupied by a wooded thicket of which some of the trees are being preserved. The building will ultimately have three floors, allowance having been made for partly duplicating the locker and bath rooms on a top (first) floor. The external facing will be stucco.

The cost will be £23,485 (including a boiler plant), equivalent to £13 12s. per man. The cost of the canteen will be £1,185. Present accommodation for 1,728 men and allowance for 864 additional.



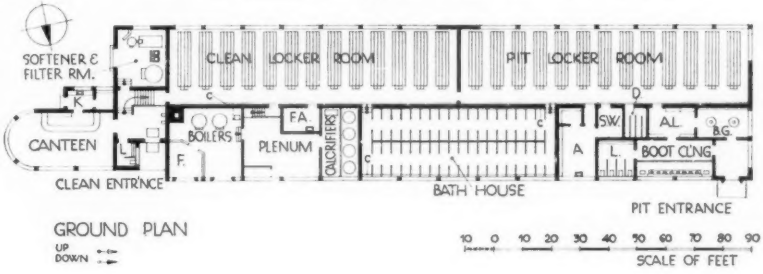
HAFODYRYNYS BATHS, SOUTH WALES *(below)*

Architect: W. M. Traylor [*L.*]

This building, now under construction, is a single-floor type on a steeply sloping site. The canteen is at the lower level, the locker rooms and bath house being approached by internal stairs.

Owing to the subsoil being deeply made ground, concrete piling has been necessary, resulting logically in a framed superstructure of reinforced concrete; this is brick filled and the whole cement rendered, finished white.

The cost will be £16,845 (including special foundations, water treatment plant and generating plant), equivalent to £17 1s. per man. The canteen cost £900. Total accommodation 988 men.



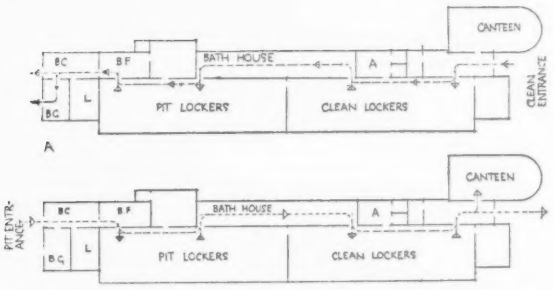


Fig. 1. Diagram of Circulation.—Above, circulation to the pit; below, circulation from the pit. The diagrams are taken from the ground floor plan of Coventry Colliery Baths. Reference: BF, Bottle Filling; BG, Boot Greasing; BC, Boot Cleaning; A, Attendant; L, Lavatory

Continued from page 1077]

while suited for a small scheme, would not be universally acceptable in large installations.

RAISING STANDARDS IN THE INDUSTRY

The overcoming of early prejudices on the part of the workers makes an interesting study in human psychology. The miner is conservative in his habits and beliefs; in some districts the belief was widely held that if the miner washed his spine he would lose his strength. A good deal of propaganda by the Welfare Committee and District Committees has been required, and is still being undertaken to persuade the men of the advantages which pithead baths would give them. The best means of propaganda is found to be the erection of a bath in a colliery area; the workers, specially the younger ones, are rapidly convinced and spread their opinions to adjacent collieries. The miners' wives, who find the beneficial results in their own houses, also exert a strong influence towards the establishment of baths.

The architectural department have necessarily been closely identified with this propaganda side of their work. Not only has their close study of bath users' comfort and convenience been of importance in this respect, but good design in proportions, choice of materials and colours, has had a strong influence. That their buildings are light, pleasing and colourful has perhaps been as important as functional efficiency.

The influence of their work is, however, much wider than mere persuasion that pithead baths are desirable. Both owners and mineworkers are rapidly being brought to realise that slum conditions are not really necessary in what is admittedly a dirty industry. In many cases the building of a pithead bath has led to clearing up of colliery yards, planting of trees and shrubs, the cleaning and repainting of existing buildings, etc. Coventry Colliery, illustrated in this article, is a revelation of what can be done by owners possessed of vision; here the yards are swept clean and bordered with whitened kerbs; unused areas are covered with well-kept lawns; lighting is by concrete lamp standards of good design; the approach roads are lined with trees and shrubs.

CIRCULATIONS AND SITES

The work of the architects has also had some influence in the planning of general circulations of colliery yards. The provision of a bath building necessitates study of the ways by which the men enter and leave the premises and in many cases has led to the replanning of colliery circulations, or the working out of circulations where before they had been hardly considered at all.

The men arrive by bus, bicycle or on foot and provision has to be made for bus parks, turning spaces and cycle sheds adjacent to the clean entrance. From the pit entrance large numbers of men must be able to assemble near the lamp room and pass straight to the shaft. Since the sites for bath buildings are usually limited and irregular, the arrangement of circulations is often a difficult problem and any attempt at standardisation both in circulation and in the actual buildings is precluded.

The clean entrance to the bath building is always placed as conveniently as possible to the main approach and the pit entrance towards the shaft or shafts. The procedure inside the building (see Fig. No. 1) is as follows: a mineworker, entering at the clean entrance, finds a row of drinking fountains in the entrance lobby; he passes to the clean locker room and removes his clothes, placing them in his own numbered locker, of which he has the key. Taking towel and soap he goes through a door or passage to the pit locker room, where he puts on his pit clothes, leaving the soap and towel in a second locker. He then goes out through a room or lobby in which are special taps for filling water bottles. On two or more days a week the boot greasing room is opened and he goes through this, on the way greasing his boots at a special machine.

Coming back from the pit the mineworker enters the boot-cleaning room where power-driven brushes allow him to remove the pit dirt from his boots. He then enters the pit locker room and removes his pit clothes, takes his towel and soap and enters the bath house. This contains a number of cubicles, each with a shower. Thence he passes to the clean locker room and puts on his clean clothes. A small first-aid room opens off the clean locker room in which minor cuts and abrasions can be treated. On leaving, the mineworker finds the canteen conveniently placed.

DETAILS OF ORGANISATION

Since the miners' clothes, particularly the pit clothes, are frequently wet, the lockers have warmed air circulated through them. The plant does not give full air conditioning, but consists of a fan and heater with viscous oil filters at the intake. The rows of steel lockers are connected to a main air trunk which drives warmed air into them. (See Fig. No. 4.) The air escapes through louvres in the lockers, warming the interiors of the locker

rooms whence it is extracted by fans in the walls or roofs. The plenum plant is also used to serve the other rooms in the building, the warm air entering through grilles provided in the walls. A graduation of temperature between rooms acclimatises the miner to the change from the warmth of the pit to outdoor conditions.

The large amount of dirt carried into the building demands special consideration of cleaning facilities. Walls are of hard impermeable surfaces, usually glazed tile or cement glaze, and the floors are graded to fall to gulleys. Hose connections for washing out are provided in tiled recesses at convenient intervals.

Canteens have proved to be very popular and often have a surprisingly large business turnover, the consumption of milk being very large. The tired worker finds a few minutes' rest and refreshment very welcome before the journey home, sometimes involving a long walk. Good design and bright colouring have made these canteens very attractive.

STRUCTURE

The majority of pithead baths are constructed with a mixture of solid and cavity brick walling, according to loads and exposure. Some are finished with facing bricks, others with cement stucco, white or cream.

A boot-greasing room. The machine is designed to prevent waste of grease. The brushes fit into slots on a rotating shaft. One-sixth turn forces into the container enough grease for one man's use. The blocks on this page were lent by and are used with the permission of the Controller, H.M. Stationery Office

A typical staircase. Glazed wall tiling, sea-green in colour, has vertical joints emphasised in white cement. The wrought iron balustrading is painted black and aluminium. From the Manor Powis Colliery Baths, Lanarkshire

White external surfaces are not unpractical, as may appear at first glance. Apart from the fact that many collieries are now "all-electric," the use of fuel economisers and dust extractors in colliery plant keeps the air clean round a colliery so equipped and many collieries are in rural areas away from other smoke-producing buildings. The cheerful appearance of a light-coloured building is of psychological value to the workers. Facing bricks are not always of types which most architects would favour, but others are often not easily obtainable, and specially when the colliery owners have also their own brickworks and the employment of local labour benefits the district.

Pitched roofs are occasionally used; but the freedom in planning given by flat roofs has led to their almost universal adoption. Concrete beam and slab construction is usual both for roofs and suspended floors. Where locker rooms are top-lit, a system of main beams with intermediate slabs near the walls is common practice. (See Fig. No. 4.)

Foundations follow normal practice except where sub-

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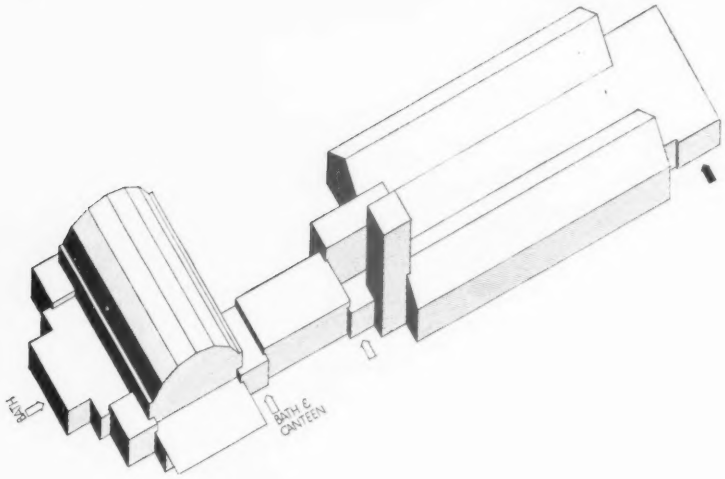


SHERWOOD COLLIERY BATHS, NOTTINGHAMSHIRE

Architect: A. J. Saise [*A.*]

This interesting scheme includes a swimming bath provided at the request of the District Committee. The group is planned to face the colliery buildings across the approach road.

The swimming bath is of reinforced concrete, the superstructure being framed, with arched trusses in the same material. The walls are infilled with brick and the trusses with a patent light hollow slab decking. The interior colour scheme is in pale green and blue. The bath is open to miners and their families at a small charge and

Below is the interior of the swimming bath which has a dado of coloured cement glaze with distempered brick walls above

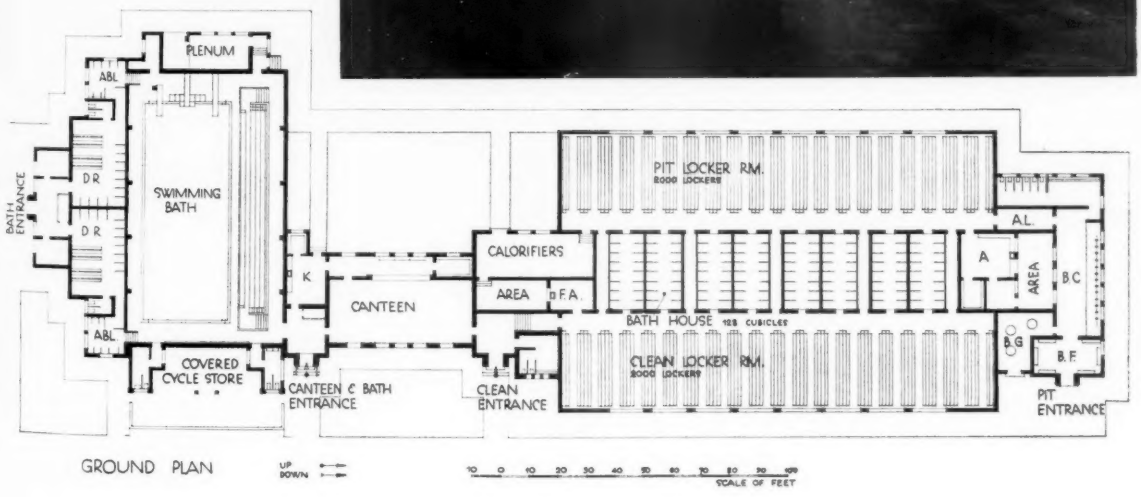
to members of the general public at an increased charge; it is apparently proving a good source of revenue. A swimming club has been organised and at intervals aquatic sports are held, to which the public are admitted; the seating accommodates 325 spectators.

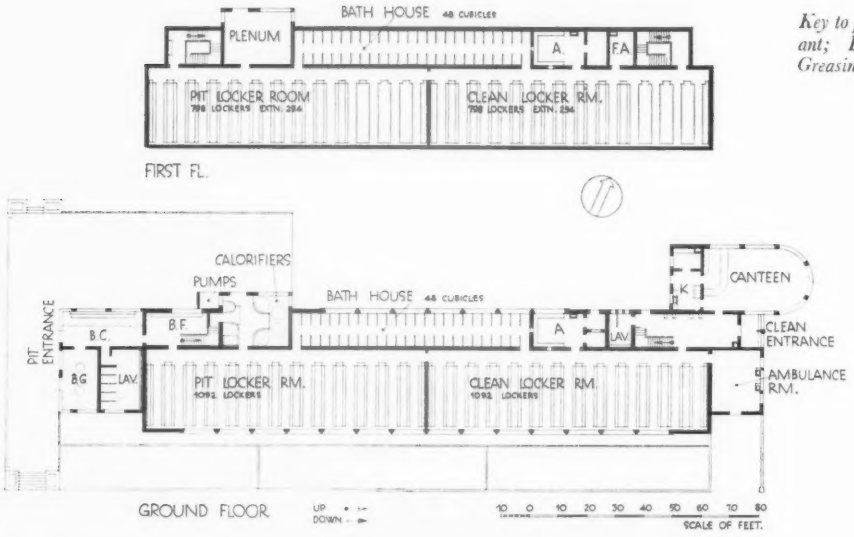
The plan of the pithead baths is a fairly typical one, used where the site permits as it is economical in external walling and services. The roofs of the locker rooms are pitched and covered with protected metal corrugated sheeting.

The building was opened on 28 June 1934. The pithead baths accommodate 2,000 men. The cost was £19,200, equivalent to £9 12s. per man. The swimming bath cost £9,845, the canteen £1,995, and the cycle store is estimated to cost £520.

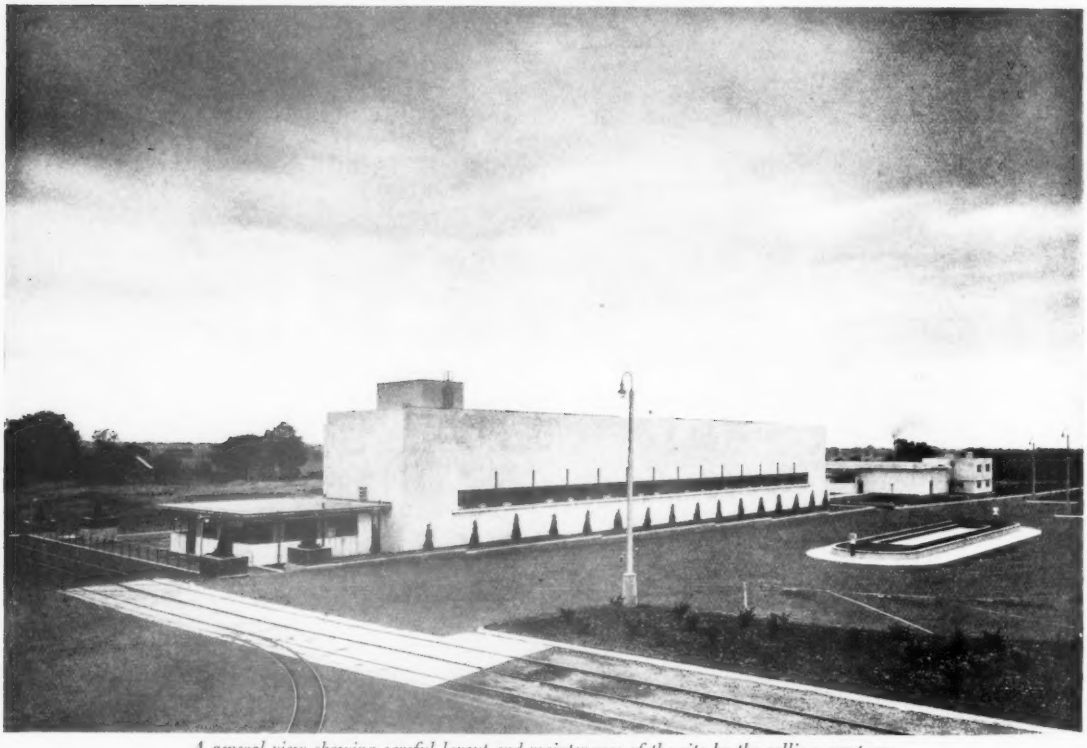
A view of part of the main front

Key to plans: FA, First Aid; A, Attendant; BF, Bottle Filling; BC, Boot Cleaning; BG, Boot Greasing; K, Kitchen; Abl, Ablution; DR, Dressing Rooms

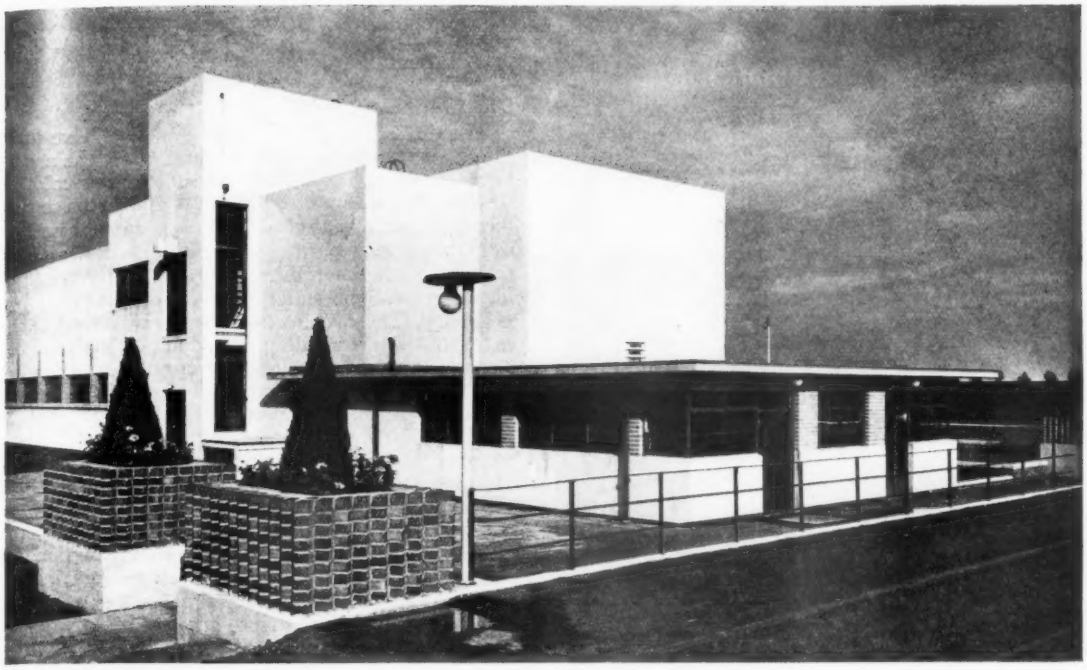




Key to plan: FA, First Aid; A, Attendant; BF, Bottle Filling; BG, Boot Greasing; K, Kitchen; BC, Boot Cleaning; AL, Air Lock

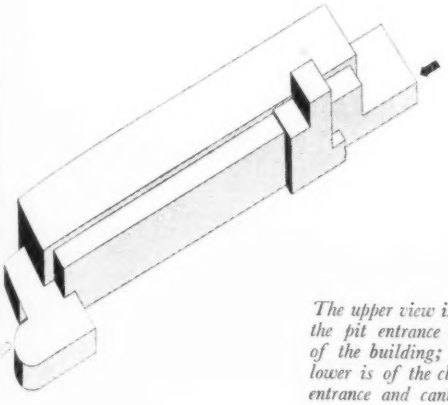


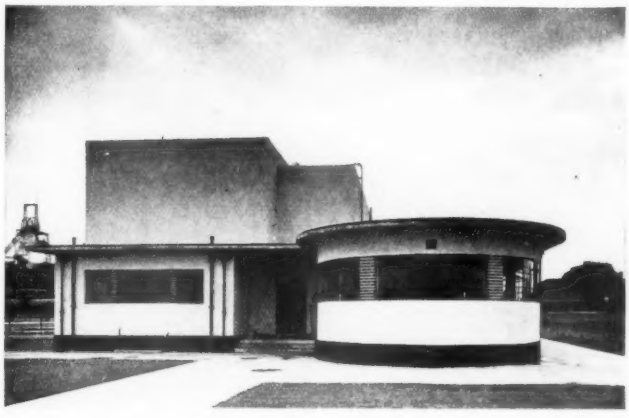
A general view showing careful layout and maintenance of the site by the colliery company. On the right is an ornamental pool between the bus park and road



COVENTRY COLLIERY BATHS. *Architect: W. A. Woodland* [*L.*]

This is an unusually interesting scheme because the colliery company have taken great care to preserve the amenities of a rural landscape. The baths building forms an important unit in a well-planned and maintained layout in which unused areas have been turfed and roads and paths lined with trees and shrubs. The building lies along one of the service roads, facing a bus park with an ornamental pool between. It is surfaced in cream-coloured cement rendering, the window mullions being of vermilion-coloured glazed bricks. The plan is of the elongated type, on two floors of which the upper is top lit. The building which has been open about six months accommodates 1,890 men at a cost of £17,010, equivalent to £9 per man. A voluntary contribution of £4,000 was made by the colliery company towards the cost of the baths, canteen, etc. Water and sewage treatment plants were included in the scheme. Additional photographs from this scheme are on pages 1086 and 1090.





The upper view is of the pit entrance end of the building; the lower is of the clean entrance and canteen

Fig. 2.—A typical canteen with walls of cream tiling banded with vermilion and black. The ceiling is painted deep cream and has sunk panel lighting. The furniture is red and black

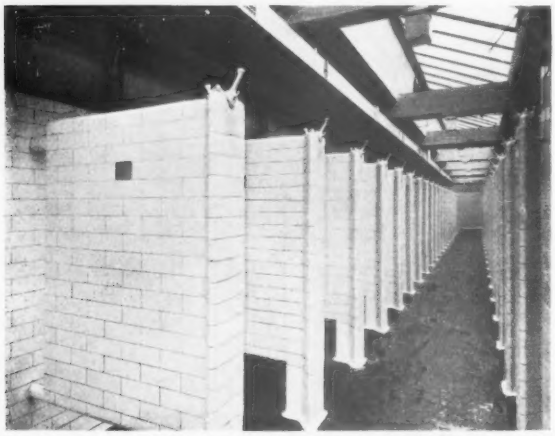


Fig. 3.—A typical bath house. The shower bath cubicles are in white glazed partition blocks. The special peg fitting holds the bather's towel and key and the shower curtain

Fig. 4.—A typical locker room showing the plenum ducting connecting the ranges of lockers. The photographs on this page are from Coventry Colliery Baths

Continued from page 1081]

sidence is likely when reinforced concrete is used or on made ground, for which piling is required.

STRUCTURAL FINISHES

The surfaces of pithead bath buildings have to withstand abnormal wear; at the same time, the architects have aimed at using materials of pleasing colour and texture. These two aims have in the past been somewhat incompatible. Glazed fireclay tiles are used in preference to glazed bricks, partly because the latter are awkward to bond with other brickwork and partly because replacement can be carried out easily should it become necessary. The architect's department uses a range of excellent colours in tiling, including rich reds and blacks to contrast with pale blues and greys. On wall surfaces liable to less wear cement glaze is employed, again in good colours. Upper parts of walls and ceilings are finished with water paint. The cement glaze and water paint are placed direct on the brickwork or concrete; no internal plaster is used except in canteens, first-aid rooms, etc., where a finer finish is desirable.

After a good deal of experiment, a good flooring material has been found to be a hardened asphalte; this is particularly suitable in the locker rooms and bath houses as it withstands the wear of heavy boots and is not too cold for bare feet. Large quarry tiles in patterns are sometimes used in the canteens.

There is very little woodwork. Doors are flush-panelled and surfaced with metal-faced plywood which is painted. Lockers are of galvanised steel, spray-painted in aluminium. Windows are of steel. A feature of the bath buildings is the use of standard lettering of good design.

The pipes of services are all exposed and painted in identification colours which harmonise with the general decorative scheme. Electric wiring, which has to withstand a considerable degree of damp heat, is of cab-tyre sheathing held clear of the walls and ceilings on insulators.

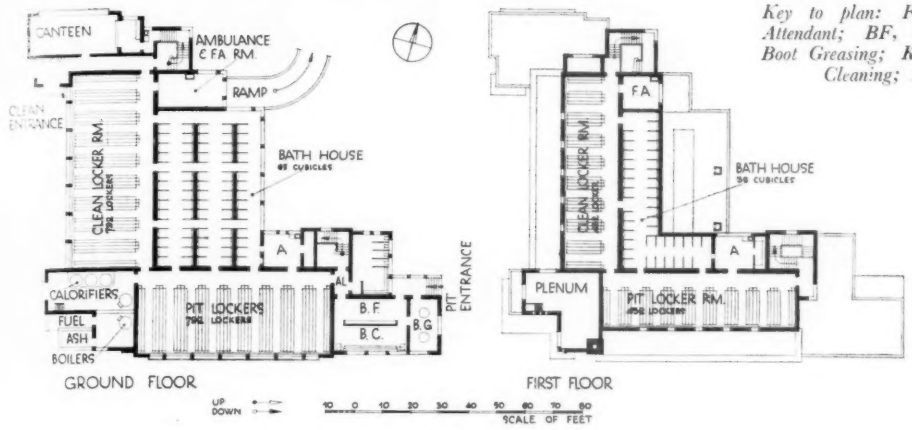
CONCLUSIONS

The concentration by a group of architects on the one set of problems presented by these pithead baths has led to a high degree of technical finish. Though standardisation of plans is not possible, detail equipment is repeated in all schemes; continuous study and improvement has produced what amounts to a set of standardised articles of equipment and of planning dimensions. A steady reduction in cost per man accommodated has been a natural result. It is interesting to note that standardised requirements, dimensions and equipment have produced finished buildings that are anything but stereotyped.

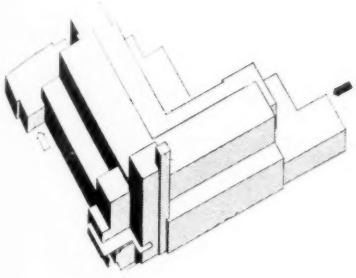
The outlook of the Miners' Welfare Committee on the architectural side of their work is summarised in the following notes taken from their Annual Reports for 1933 and 1934:—

"We aim to secure effect from the external appearance of a building of distinctive note and of design suited to

[*Continued on page* 1090



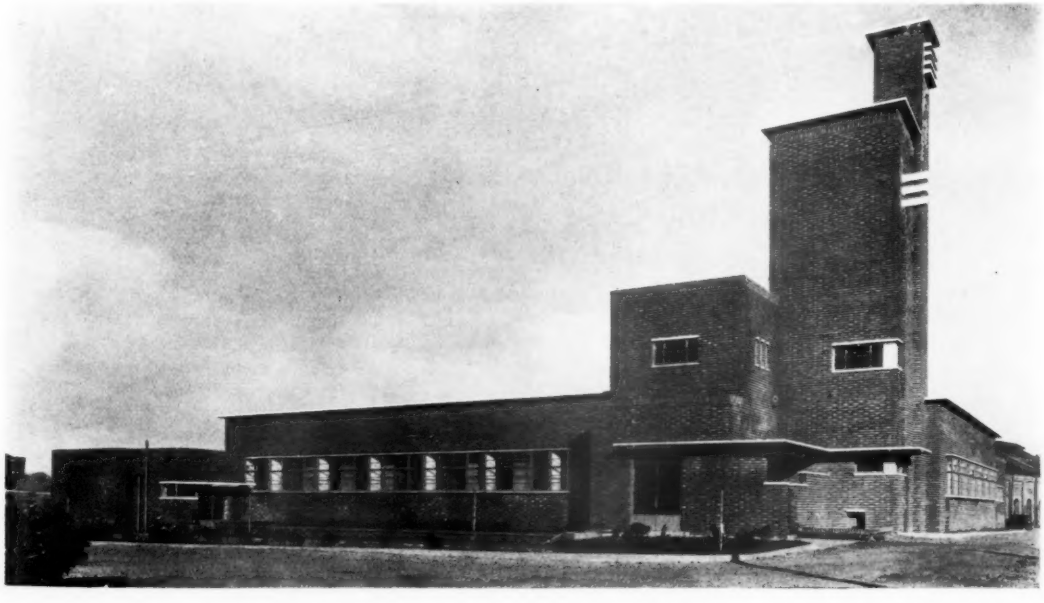
Key to plan: FA, First Aid; A, Attendant; BF, Bottle Filling; BG, Boot Greasing; K, Kitchen; BC, Boot Cleaning; AL, Air Lock



CARDOWAN COLLIERY BATHS, LANARKSHIRE

Architect: J. A. Dempster [A.]

The ground floor only of this building has so far been built; the completed scheme is shown in the axonometric. It occupies a central position flanking the colliery office on the main access road. The view reproduced below shows the side (clean entrance) towards the road. The colliery ambulance department has been incorporated with the baths first-aid room and a ramped entrance provided. The accommodation is at present for 792 men, with a space for an additional 432 men. The cost is £13,500, equal to £17 1s. per man accommodated. The canteen cost £830.

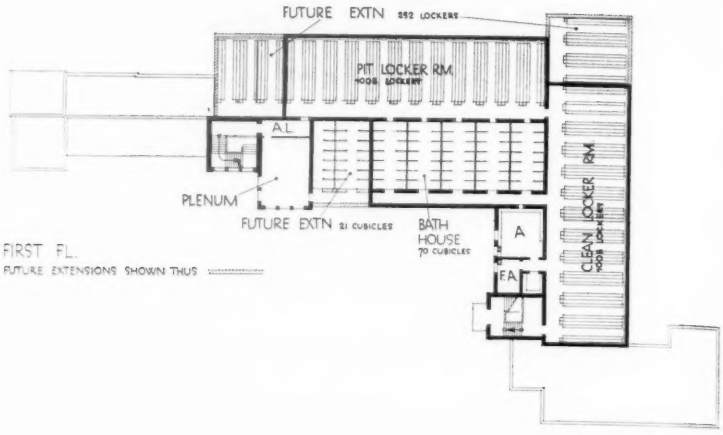


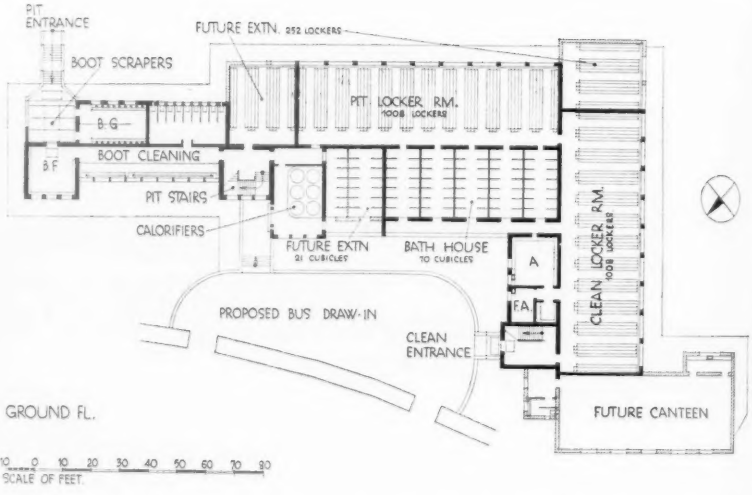
BETTESHANGER COLLIERY BATHS, KENT

Architect: C. G. Kemp [*A.*]

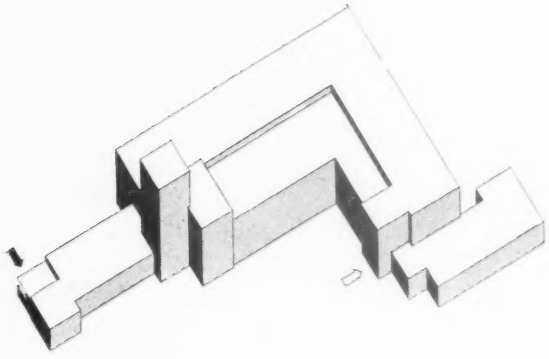
An example from one of the new collieries in the Kent coalfield; the provisions for future extensions, likely to be necessary with increased output, are shown on the plan. The building is placed between the colliery and the housing estate specially built for the mine workers. The general view on the opposite page is of the side facing the village. The canteen shown on the plans as "future canteen" has now been built, and is illustrated opposite. A small stage with a curtain has been provided, so that the canteen can be used for concerts. The building is faced with local bricks from Deal.

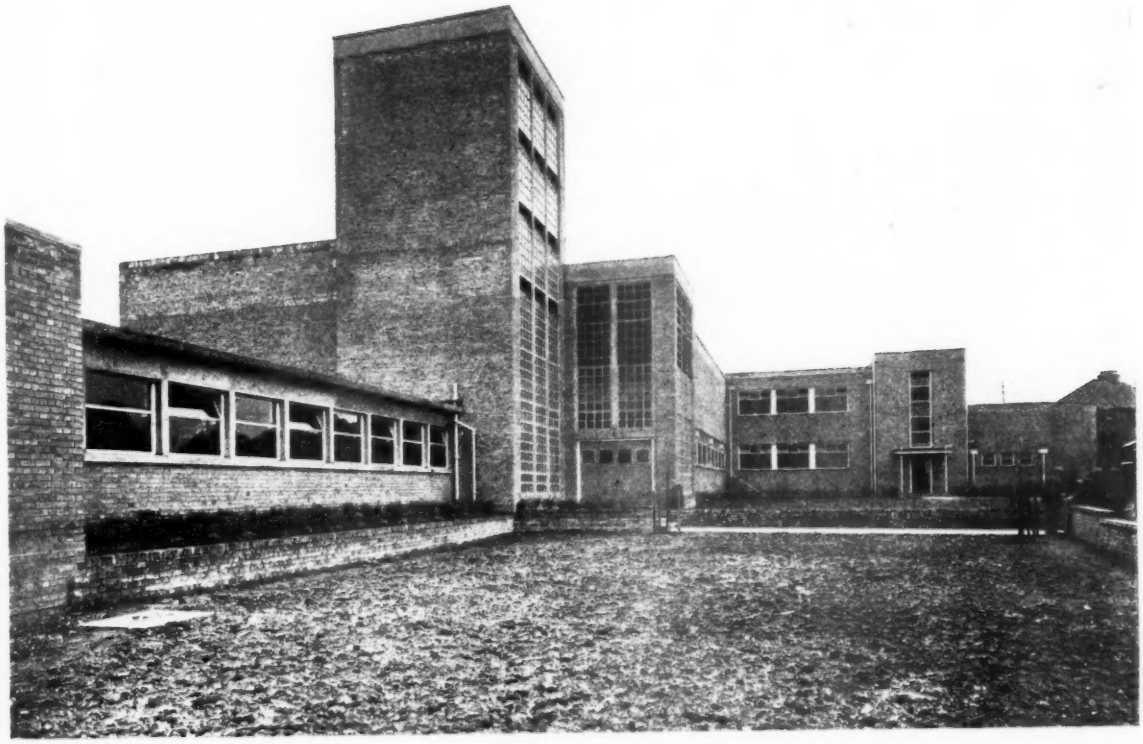
Opened on 28 April 1934, the building accommodates at present 2,520 men at a total cost of £25,712, or £10 4s. per man. The cost included a large sewage treatment plant and a special drying-room. The canteen cost £1,785.

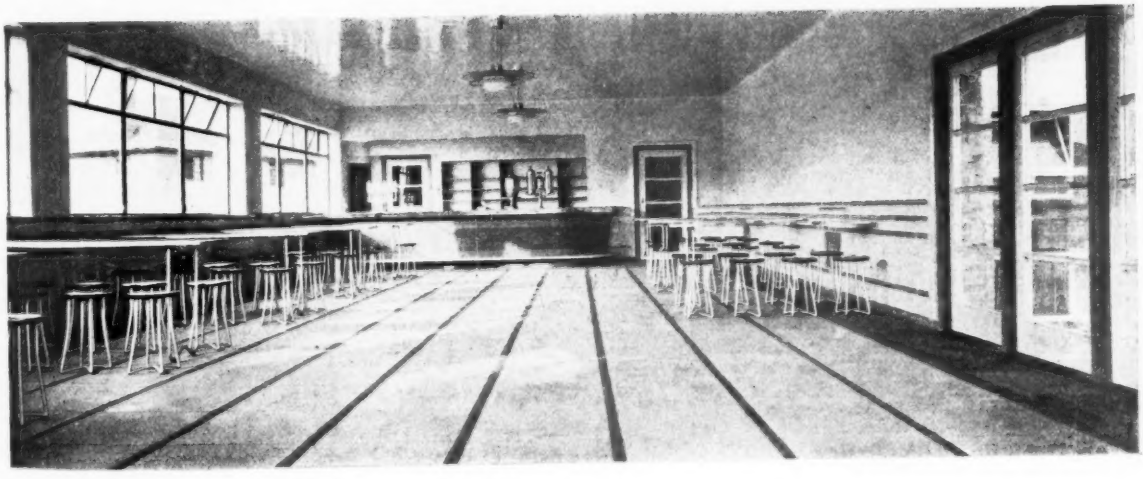


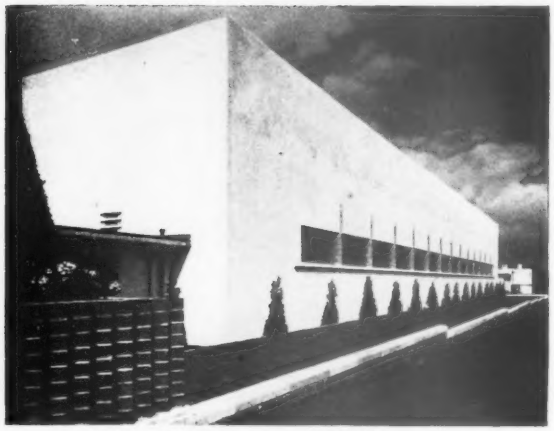


Key to plans: FA, First Aid; A, Attendant; BF, Bottle Filling; BG, Boot Greasing; AL, Air Lock









Planting at Coventry Colliery

Continued from page 1086

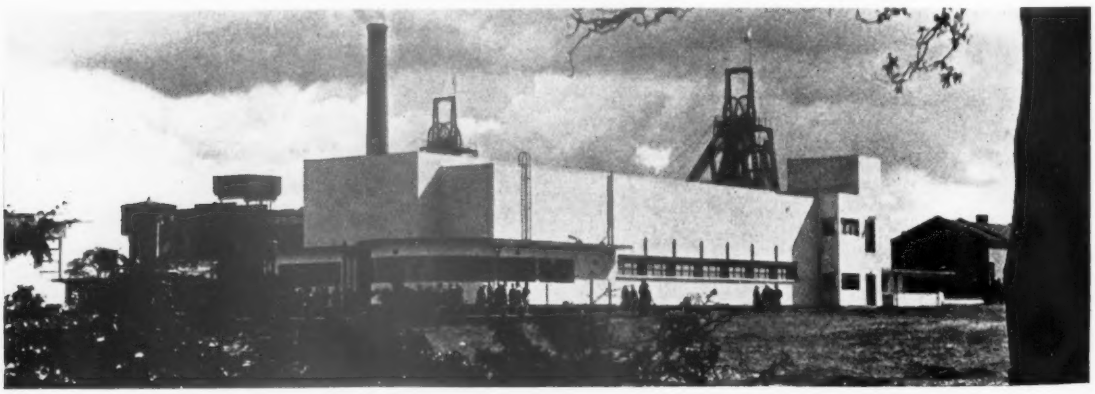
the natural setting or existing grouping. We do not feel justified in allowing expenditure on ornament and decoration, but our architects are able to achieve results of architectural worth relying solely upon line and well-proportioned surfaces. Indeed, it may be said that the more satisfactory modern industrial buildings have an extreme simplicity in elevational treatment with a marked absence of fuss. Economical building need not be mean, but building solely for cheapness without regard to design would be unworthy. A well-proportioned tower, a well-designed entrance, a balanced façade, are good things to look upon."

" Bright and cleanly interior decorations are provided in baths and canteens in order to strike the note of brightness, cheerfulness and cleanliness in the users—an inestimable benefit to men just raised from the underground gloom. But bright-coloured paint and tiled surfaces are unusual and unexpected at the pithead, and it is not surprising perhaps that the first thought is of undue finish and expense. This erroneous impression quickly changes to appreciation and enthusiasm upon further consideration, but it can be harmful to the work if repeated by the less thoughtful."

"Well-arranged and well-kept surface buildings, apart from their effect on operating efficiency, arouse a psychological response in the miner resulting from improved environment at the place of work. The work appears less burdensome and some improvement in the life's occupation of the miner is effected."

The last Annual Report of the Committee (for 1934) was reviewed in the JOURNAL of 13 July 1935, p. 1001. The reviewer pointed out that it is the practice of the department to give credit to the assistant architects responsible for the designs. The buildings illustrated in this article were selected by Mr. Forshaw to illustrate the more recent work of his department and do not attempt to include examples of the work of all his assistants. Up to the end of last year 154 baths had been built to accommodate 200,674 men and 262 women. It is anticipated that the total number of mineworkers for whom baths will be provided will be rather more than 500,000.

In addition to the building of pithead baths, the architectural staff are concerned with the erection of institutes, halls, recreation pavilions, shelters, etc., and during 1934 grants amounting to £68,537 were made from the Fund for this type of building. A large proportion of this sum was spent on additions and improvements to institutes and halls already provided.



Daylight Problems under the Town and Country Planning Act 1932*

BY PERCY J. WALDRAM, F.S.I., L.R.I.B.A.

The Science Standing Committee have been requested to collaborate with an appropriate committee of the Department of Scientific and Industrial Research in the formulation of practical structural rules with regard to fenestration, such as would enable designers to secure varying desirable degrees of amenity in the admission of daylight into interiors. This invitation has been accepted and suggestions will be made in due course.

In the opinion of the Committee, however, it is equally, if not more, desirable that the views of architects should be obtained as to what degrees of amenity should be aimed at in different classes of neighbourhood—such as urban central, urban residential, suburban and rural. This question is no longer one of academic interest, but is one of considerable immediate practical importance, inasmuch as the Town and Country Planning Act, 1932, empowers local authorities so to regulate new buildings as to preserve appropriate degrees of amenity, and Model Clauses have already been published by the Ministry of Health for the guidance of local authorities in drawing up schemes for approval.

The following article written by Mr. Waldram at the request of the Science Standing Committee purports to state the problems and requests constructive criticism; and the Committee sincerely hope that members of the Institute will find time to apply their minds to the subject and assist them to put forward useful proposals.

The Present Difficulties and Delays

We are only just beginning to feel the effect of the machinery detailed in the Town and Country Planning Act, 1932, to enable the principles of town planning to be applied to building schemes in built-up areas.

That machinery is shortly as follows:—

A local authority or Joint Committee having duly passed and advertised an approved resolution to prepare a planning scheme for a defined area, and the Minister having approved such resolution, any building developments in that defined area, even though they may comply absolutely with existing bye-laws, can—until the scheme has been prepared and has come into operation—only take place at the developer's risk unless he obtains specific approval from the authority, *qua* planning, under the general Interim Development Order.

Pending such approval anything done which may prove to contravene the terms of the scheme may be subject to a demolition order at a later date. During this interim period everything will of necessity be more or less unsettled, and any uncertainty as to the precise powers of local authorities inevitably arouses apprehension as to two classes of popularly elected representatives whom local government attracts, always has attracted and always will—the crank anxious to impose his theories on his neighbours for what he firmly believes to be their good, and the astute individual who realises the material advantage of being in a position to regulate his neighbours' property, nominally in the interest of the community at large.

These two undesirable types, however, are thoroughly well-known features on local councils, where they are usually kept in check by the straightforward common sense of the majority of any typical body of British men and women.

But uncertainty of any kind gives them scope and opportunity, and for this reason it is most desirable that no period of doubt as to what rules should apply to any phase of town planning ought to exist for a moment longer than is necessary.

Town planning being a comparatively novel feature of local self-government, vitally affecting many interests, Parliament has allowed generous periods for consideration at every stage in the evolution of a scheme, up to its final approval by Parliament, complete in all its details and setting forth in precise terms the exact limitations of the powers of the authority which will administer it.

Between the approval of the first resolution of an authority to seek powers and the date at which it will be in a position to apply them with certainty a total period of some three years may elapse, and probably will, as local bodies are not famous for expedition, even if any of the periods allowed for the completion of intermediate stages are not extended by the Minister of Health under the powers given to him under the Act.

During the period of transition, no one can possibly prophesy with any certainty what form any given scheme will finally take; or as to what powers will be granted to the responsible local authority or with what precision, if any, those powers will be defined. The Ministry of Health may even be content to grant powers in the general terms of the Act, leaving the local town planning committee to deal with each case on its merits. On the other hand, the Ministry of Health may, and it is to be hoped will, require precise regulations comparable with the present building bye-laws.

* Published by authority of the R.I.B.A. Science Standing Committee.

But, in the meantime, development must go on, local committees must give interim consents, and developers and the architects advising them must take risks.

It is therefore obviously essential that architects and surveyors at least should at the earliest possible moment make up their minds as to the limits, if any, within which it is desirable to confine the final powers of local committees, necessarily expressed in the Act in general, not to say vague, terms. They should also agree without delay upon any rules and criteria necessary to give definition to any aspect of town planning, and upon the expression of such rules or criteria in simple practical terms.

The Scope of the 1932 Act

The scope of the Act is wide and the extent to which it may affect design in built-up areas is indicated in Section 12 as follows:—

(1) The provisions to be inserted in a scheme with respect to buildings and building operations may include provisions—

(*a*) prescribing the space about buildings;

(*b*) limiting the number of buildings:

(*c*) regulating, or enabling the responsible authority to regulate the size, height, design and external appearance of buildings;

(*d*) imposing restrictions upon the manner in which buildings may be used, including, in the case of dwelling-houses, the letting thereof in separate tenements; and

(*e*) prohibiting building operations, or regulating such operations in respect of matters other than those specified in this subsection:

Provided that, where a scheme contains a provision enabling the responsible authority to regulate the design or external appearance of buildings, the scheme must also provide that any person aggrieved by any decision of the responsible authority under the provision aforesaid may appeal against the decision either to a court of summary jurisdiction or to a tribunal to be constituted for the purpose under the scheme, as may be thereby provided, and the grounds upon which such an appeal may be brought shall include the ground that compliance with the decision would involve an increase in the cost of the building which would be unreasonable having regard to the character of the locality and of the neighbouring buildings.

(2) The provisions to be inserted as aforesaid may—

(*a*) differ as respects different parts of the area to which the scheme applies; and

(*b*) be made applicable, either with or without modification, to existing buildings as well as to buildings which are not existing buildings; and

(*c*) be imposed as permanent provisions, or as provisions operating only pending the coming into operation of an order under the provisions hereafter in this Act contained with respect to general development orders.

Section 18 details the machinery under which owners whose property is reduced in value by the operation of the Act can be compensated; but this is severely limited by Section 19 which enacts that no compensation shall be payable in respect of the injurious affection of property by the coming into operation of any provision of the scheme which, *inter alia*,

(*a*) prescribes the space about buildings;

(*b*) limits the number of buildings;

(*c*) regulates, or empowers, the responsible authority to regulate the size, height, design or external appearance of buildings.

Section 20(2) also limits the payments of compensation for the effect of any demolition order, made to enforce compliance with a scheme, to "existing buildings." As "existing buildings" are defined in Section 53 as those existing or under contract before the date of the resolution to town-planning coming into effect it follows that after that date and before the appearance of precise regulations the property owner can only build on an intelligent anticipation by the authority of the powers which the Ministry of Health will, with the approval of Parliament, eventually entrust to it; although he can always put himself right, *qua* compensation, by an appeal to the Minister.

The Act as a Means of Promoting Amenity

It will be seen that the Act empowers popularly elected committees to preserve all kinds of public amenities—amenities of ordered planning, of space around buildings and of aspect, amenities of design, amenities of existing worthy buildings, and last, but not least, amenities of light, air and sun in built-up areas.

Parliament could not embody codes of such amenities in the Act because they do not yet exist. *Quot homines (et feminæ) tot sententiæ.* If buildings had in the past been planned in towns with as much regard for the street and for the vicinity as for the selfish possibilities of the site; and if building owners had shown as much regard for the amenities of their neighbours as for their own comfort and profit there would either have been little or no need for a Town-Planning Act at all; or at least there would have been in existence well established codes of communal amenity which could have been incorporated in the Act instead of the lengthy experimental process, which Parliament has been forced to enact, of evolving such codes. But with things as they are all Parliament could do was to provide means whereby each district and the country at large can so control future building as to obtain what each district and the country at large decides to secure by its own efforts: and in the meantime to apply a check, and a highly necessary check, upon private enterprise which, not infrequently, proves on examination to be synonymous with individual greed.

The Architectural Problem and its Urgency

Architects, individually and at large, should apply themselves at once to the task of evolving, discussing and agreeing upon the necessary codes in practical forms suitable for insertion in final town-planning schemes. There is time for the architectural profession to make its influence felt and its voice heard. But none too much time.

Much has already been done in the evolution of the new science of town-planning in establishing codes of amenity with regard to ordered planning, orientation, space around buildings, and aspect, as applied to the laying out of new districts. Much remains to be done in that part of the work, but it is already in hand, and in good hands, as are also all questions relating to sanitation.

The thorny item of design and the preservation of the priceless amenities of beautiful ancient buildings, although purely a matter of æsthetic taste which does not lend itself to specific codes, has been provided with an æsthetic judiciary on simple lines—compulsory reference to small local panels of architects, with appeal if necessary to larger county or district panels, and final appeal—as to the House of Lords—to the Fine Arts Commission.

There remains the age-old difficulty of establishing practical simple codes under which it may be possible to preserve such amenities of light, air and sun as remain in built-up areas, the discussion of which is the primary object of this paper.

Such codes are probably more urgently needed than any other criterion of amenity.

Standards of Light and Air Amenity

It is largely for architects to determine and to agree upon practical criteria; reasonable without being weak and efficient without being harsh.

Can it be done? Can any criterion be devised which can be applied impartially to the innumerable variations between different buildings, each one of which differs widely from all others in design, plan, fenestration, aspect and use?

The short answer is that it not only can be but has been done. For some years past such a criterion has governed the details for all building developments on a large and valuable estate in the West End of London, comprising all kinds of buildings from palatial town houses to workmen's dwellings, royal residences and semi-slums, huge stores and tiny shops, by an owner whose trustees were keenly alive to their duty of administering the estate on strict business lines with due regard both to the immediate profit of huge ground rents and to future developments as well as to the vital importance of attracting the best and most profitable class of tenant by means of scrupulously fair treatment of sitting lessees, absolutely powerless under rigid leases which state specifically that all amenities of light, air, sunshine and prospect are enjoyed only on sufferance, even though they might be vital to large rental values payable over long terms.

The criterion, adopted after careful consideration as being one which fairly represented reasonable amenity as understood by dwellers in an urban residential neighbourhood—as distinct from suburban or urban central—is simple in the extreme.

It is that no new building should be permitted which occasioned to neighbouring buildings, either as existing or as rebuilt on proper lines, a greater degree of obstruction than would be represented by continuous buildings of full London Building Act height (80 feet above pavement plus two storeys or 20 feet set back at 75 degrees) along the opposite side of a street 100 feet wide between buildings.

The application of this rule to any given case of rebuilding involves, of course, the planning of future rebuildings on adjoining sites; but no difficulty has been experienced on this account.

When first laid out as an aristocratic suburb 100 to 150 years ago the estate consisted of buildings not exceeding 50 feet high along streets which were made 50 feet wide, the height of buildings in any street of lesser width being limited to its width between buildings. This was in effect a variable standard of amenity, dwellers in narrow streets having lighter rooms on upper floors than those in wider streets. In order to obtain a criterion applicable impartially to all lessees it was fixed at the light left by a continuous obstruction 100 feet high at a distance of about 105 feet.

The general effect of this degree of obstruction can be visualised from the example of Kingsway—laid out on the site of demolished old London slums, and virtually an example of fairly modern town-planning. This street is 100 feet wide between buildings, most of which are taken up to the full permissible height under the London Building Act of 80 feet on the frontage line with two storeys in the roof set back at 75 degrees, which corresponds approximately to the same criterion of amenity, viz., the light left by a continuous obstruction 100 feet high and 105 feet distant.

At first sight it would appear that any such criterion of amenity, based upon the simple condition of an obstruction of uniform height parallel with the plane of windows and therefore giving an unbroken horizontal sky-line over the whole of the aspect, could have but a very limited field of useful application to practical problems in the lighting of town interiors where, more often than not, obstructions of all shapes and sizes have been built at various angles to the planes of the windows which they obstruct; with the result that the amount of light left to any interior from over and beside them varies irregularly at every point all over that interior.

The Measurement of Daylight

But the modern methods of measuring and of predetermining daylight, as described in the well-known Technical Paper No. 7 ("The Penetration of Daylight and Sunlight into Buildings"), III. Research D.S.I.R. (H.M. Stationery Office), are just as applicable to the most intricate cases of irregular fenestration and of complicated external obstructions as they are to the most simple cases of unbroken horizontal sky-lines viewed through square windows, the only difference being that the increase in the complexity of external obstructions, of course, involves increased labour in the production of plans of interiors contoured with the lines of demarcation between adequate and inadequate light according to any given standard.

The simple system of depicting the results by means of contoured plans lends itself readily to instructive comparisons.

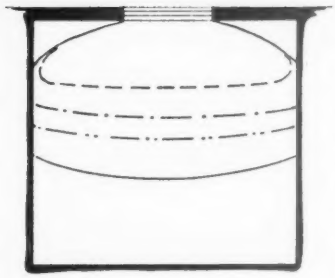


FIG: 1.

In the simple cases of long unbroken lines of obstruction of uniform height at uniform distance (Fig. 1), such as are often presented by the buildings in town streets, contours can generally be estimated with close accuracy without calculation, merely by drawing one or two straight lines on plan and section.

More complicated cases, such as that of buildings on corner sites receiving light from various directions along converging streets of irregular buildings (Fig. 2), involve more tedious but not more difficult work, to lessen which photographic and other labour-saving devices have been evolved.

Once the conditions of lighting, present or future, over an interior are measured and represented on a contour plan, it is a simple matter to ascertain how such conditions compare with those which would obtain under any given standard of external obstruction, provided the latter are specified in the form of some regular obstruction continuous over the aspect. Such produce "grumble point" contours which can readily be estimated and superimposed as in Figs. 1 and 2. Even in the cases of irregular fenestration as in Fig. 2, the comparable contours resulting from regular obstructions at fixed distances from each window can be estimated with equal ease.

The results to be obtained by such comparisons do not, of course, provide any answer to the problem as to whether any given disposition of adequate or inadequate light over a given interior represents good, bad or indifferent lighting of that interior considered as a whole; but it does at least enable one to say whether any given interior is better or worse off under any given conditions of external obstruction than it would be if it were situated in, say, a street 50 feet wide between buildings 50 feet high.

That, in the present state of our knowledge, is about as far as it is possible to go. The knowledge gained by such comparisons is the only foundation upon which opinions as to permissible degrees of obstruction can be built up. That foundation will be reliable or unreliable according to the extent to which architects make and study such comparisons in the near future.

When it is realised that the legal and international grumble point of inadequate light for ordinary purposes is usually fairly close to the point from which no sky is visible, at least in the case of regular obstructions, it will be seen that there is much to be gained by cultivating the habit of noting the areas in different rooms over which no sky is visible at table height and connoting therewith the approximate degree of external obstruction, the fenestration, and the lighting of the rooms as a whole. This habit enables mental comparisons to be made, personal idiosyncrasies to be realised, and the basis of a sound opinion to be formed.

The Ordinary Notions of Mankind

The practice of the Courts as laid down in the legal authorities is to take each case on its merits and to endeavour to appraise it "according to the ordinary notions of mankind." This involves an answer to the question, by no means an easy or a simple one, as to what are the "ordinary notions of mankind" with regard to the natural lighting of rooms.

It might be thought that the question as to whether any interior suffering a given degree of obstruction were well lit, badly lit, or moderately well lit, could be determined on inspection under different conditions of weather by a person or number of persons possessed of the faculty of sound reasonable judgment. But even if such a person or jury were sufficiently experienced to apply the proper discount to the almost unconscious psychological reaction to the cheerfulness or dullness of walls, ceiling, floors and furniture—a task which demands skill—it would probably be found to be difficult to obtain a definite verdict.

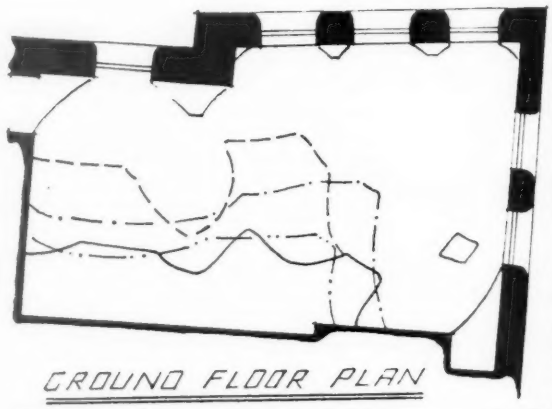


FIG: 2.

Diversity of Conditions and Diversity of Standards

Unless some particular practical user of the room were indicated, anyone whose opinion was worth having would in most cases decide that the room was good for some purposes, and bad or indifferent for others; that it might make a good dining-room, a bad kitchen, and an indifferent library; a good private office with a table in the adequately lit area near the window, and the necessary office paraphernalia in the twilight behind; fairly good for draughtsmen working on a multitude of plans, but hopeless for a number of typists. There are several reasons for this unfortunate uncertainty, so different from the certainty with which observers will concur in a decision as to whether the light at any given position, or working place, in a room is or is not adequate for ordinary or for any given purpose; and will persist in that opinion over large variations in weather over which the measurable illumination in foot-candles at the position may vary enormously irrespective of weather. Obstructed side-lit rooms present an infinite diversity of lighting conditions between the two extremes of the interior with proper windows facing an open horizon and obviously well lit all over, and the obviously dark room from which no sky at all is visible even close to the windows, such as can be found at the bottom of the so-called "light wells" still permitted, unfortunately, under the London Building Act.

The typical partially obstructed side-lit interior has some part or parts of its area, from which sufficient sky is visible, adequately or well lit; with the remainder enjoying only "diffused" light, *i.e.*, light received by diffuse reflection and counter-reflection from internal or external surfaces, and in a condition of more or less pronounced twilight.

Not only can the proportion of inadequately lit area to total area vary from 0 to 100 per cent. according to the severity of external obstruction and the size and design of the windows, but its disposition over the room may show any number of variations from the regular cut-off typical of a street of terrace houses (Fig. 1) to the irregular pattern typical of the interiors of buildings at street intersections (Fig. 2).

Even in the simple case of a room such as Fig. 1, any decision as to whether the room were or were not reasonably lit as a whole cannot be arrived at without regard to user, even without going beyond such varieties of user as may be classed as ordinary purposes of habitancy or business.

For example, reasonable user of a ground floor room in a town street as an office, a study, a dining-room, or even as a library might not require more than about 50 per cent. or less of the floor area to be above the "grumble point." A drawing office might, or might not, require more, according to the space required for files, drawing chests, etc., but a kitchen, a needlework room, or a room for typists might not be able to afford to have any material parts inadequately lit.

The presence in a room of inadequately lit areas does not of course necessarily imply the existence of excessive external obstructions; the fault may be in the fenestration. Architectural rules as to the proper proportions which should exist between the dimensions of windows and of the rooms which they light may be regarded as non-existent, and it is no uncommon experience to find rooms differing widely in area, breadth, depth and shape, all provided with windows of exactly the same dimensions in order to prevent distressing irregularity in the external elevation.

It is therefore difficult or impossible to say whether, on the basis of ordinary architectural practice, a given room is or is not properly proportioned to its windows.

It is also contrary to common sense to ignore the fact that the "ordinary notions of mankind" as to whether a room is or is not adequately lit are influenced, at least to some extent, by locality, by one's knowledge of the effect which life in more or less built-up areas has had upon the ideas and standards of ordinary reasonable people.

Such a disposition of adequately lit and inadequately lit areas over the whole of a room as would generally be classed as representing adequate if not rather good lighting in the City of London might be considered as rather poor in a Mayfair street, definitely gloomy in an open suburb, and quite unreasonable in the country.

It might be argued that such fatalistic resignation to conditions which ought to be better should be ignored and discouraged. But at least it tends to curb the impracticable zealot, and to prevent a certain amount of crying for the moon which tends to hinder rather than help real reform.

Try as we may, in our time we can never secure Mayfair conditions in the City, Wimbledon conditions in Mayfair, or rural conditions in Wimbledon. In the long run, the common sense of public opinion would prevail and would secure the repeal of any enactment, bye-law, or town-planning scheme which pursued such chimerical aims.

The Future of Light and Air Regulation
No One Standard Possible

Obviously it is neither practical nor possible to define the extent to which the limits of future building should be limited in order to preserve due degrees of amenity with regard to light and air by any detailed consideration of the requirements of given rooms. There is far too much variety in the proportions and fenestration of rooms considered to be ordinary, and far too much variation in the requirements of any room for different common purposes for any practical standardisation of the typical interior whose needs would serve as a measure of permissible obstruction. In addition there is the fact that any given neighbourhood probably includes old houses with windows designed for low obstructions, newer houses with higher windows, and ultra-modern eccentricities with overmuch glass in the wrong place.

The only feasible policy would appear to be to define degrees of limitation of outside obstruction based on the broad lines of long experience as was done in the case of the West End estate referred to above, realising that there are limits to the extent to which local authorities, the Ministry of Health and Parliament are likely to restrict development in order to preserve such amenities of light, air, and sun as remain in our unplanned and largely over-built towns and suburbs.

The limits which will be imposed upon future building are practically certain to vary as between different classes of locality, *e.g.*, urban central, urban residential, suburban, and rural. The object of this paper is to suggest possible restrictions in the hope of eliciting constructive criticism.

Practical Structural Rules for Fenestration

Closely inter-related with this problem is the probability that the increased interest in light and air will call into being practical structural rules as to fenestration. It would doubtless be possible to define desirable standards of daylight illumination which should obtain at different parts of rooms used for different purposes, and then to devise structural rules of fenestration which would enable designers to ensure that such standards will be obtained. But such rules are not in existence yet, and even if they were they would necessarily vary according to the degree of external obstruction.

In all probability it would be found necessary to work from rules, data, or graphs varying as between open aspects and aspects obstructed to some definite degree, which is almost certain to be defined as the degree of obstruction which would be occasioned by some defined continuous obstruction at a certain distance extending over the whole of the aspect.

For example, it is possible to visualise a series of practical structural rules as to fenestration applicable to situations where the degree of external obstruction—however complicated it may be—is equivalent in effect to:—

(*a*) An open horizon.

(*b*) A continuous obstruction, say 50 feet high and 100 feet distant or $\frac{1}{2}$ to 1 up to 50 feet in height.

(*c*) A continuous obstruction, say 100 feet high and 100 feet distant or 1 to 1 up to 100 feet in height.

(*d*) A continuous obstruction, say 100 feet high and 80 feet distant or $1\frac{1}{4}$ to 1 up to 100 feet in height.

(*e*) A continuous obstruction 100 feet in height and 66 feet 8 inches distant or $1\frac{1}{2}$ to 1 up to 100 feet in height.

(*f*) A continuous obstruction 100 feet high and 50 feet distant or 2 to 1 up to 100 feet in height.

It will thus be seen that the probable requirements of practical structural rules as to fenestration are more or less identical with the requirements of zoning which are certain to govern town planning bye-laws limiting future building in order to secure the minimum of light and air necessary for the health and well-being of communities.

These considerations appear to point directly to a simple practical solution of the difficult problem of defining rules as to light and air suitable for built-up areas.

Varying Standards of Permissible Obstruction for Different Zones

Practically every large town consists of a collection of neighbourhoods more or less definitely divided into districts which can be roughly classed as central, urban residential, and suburban, for which varying standards of desirable amenity as to light and air in future developments can be applied.

As in urban residential districts the rule of height of building=width of street between buildings (1 to 1) is almost certain to be adopted on the ground of a century or more of satisfactory experience, so also custom has more or less crystallised a similar rule for outer suburbs at $\frac{1}{2}$ to 1, or height of building=$\frac{1}{2}$ width of street between buildings, the typical suburban street being 40 feet wide over pavements with two-storey buildings of a maximum height of about 35 feet set back at least 15 feet from each road frontage, or 70 feet between buildings.

The permissible degree of obstruction in the central business areas of towns and cities is a more difficult problem.

Varying limits between 1 to 1 (45 degrees) up to 2 to 1 ($62\frac{1}{2}$ degrees) may possibly be approved for different districts.

The limits of obstruction specified under the Model Clauses suggested by the Ministry of Health (H.M.S.O., March 1935, 1s. net) are decidedly drastic, being for streets over 36 feet wide limited to an angle of 56 degrees from the horizontal measured from the street level in the centre of the road, equivalent to an angle of $36\frac{1}{2}$ degrees from the street level on the opposite frontage. For streets 36 feet wide and narrower the suggested limiting angle is 45 degrees from the roadway at the centre of the road, or with streets less than 30 feet measured from a point 15 feet from the frontage concerned. The suggested limits may be regarded as representing roughly the present average degree of obstruction in modern open suburbs. They would undoubtedly be considered as far too drastic for urban residential areas comparable with Mayfair, and, *a fortiori*, for commercial areas in the centre of towns.

Whatever limits are imposed, and indeed the Model Clauses provide for such variable limits being specified by local authorities, it is obvious that they must vary as between different districts, commercial or residential, town, suburbs, or rural. The fixing of zoning limits for different classes of neighbourhood in which different degrees of amenity can reasonably be expected and provided for is a matter for careful thought, but should present little or no difficulty.

The application of any standard of amenity to the height of street frontages requires some further limitation to meet the case of street intersections, exceptionally

wide streets, squares, and open spaces. The model clauses indicate that these will be provided for by some overriding limits as to permissible height, doubtless such as are to be found in existing regulations.

If, however, the Act is really to be effective in securing the minimum of reasonable amenity to town dwellers and workers, it cannot be limited to frontages on public thoroughfares—the regulations must not shirk the difficult question of defining reasonable mutual restrictions as between contiguous sites. It must give to the community the benefit which the old Roman law of light gives to certain favoured individuals, who unfortunately are only too ready to sell those benefits either for cash or for the power to overbuild profitably, utterly regardless of the thousands of workers thereby condemned to work all day and every day under artificial light or in perpetual twilight for as long as their buildings remain.

It would, of course, be easy to decree that buildings shall be set back to 45 degrees, 50 degrees, 60 degrees, or what you will from every boundary at sides and back. But even if Parliament ever sanctioned such a regulation it would probably not last six months. The injustices which it would entail and the extent to which it would in practice hamper or prevent reasonable development of warehouses in districts mainly commercial would doubtless ensure its speedy repeal.

The only fair and feasible method would appear to consider each building on its merits, laying down the lines of reasonable development on contiguous sites and defining reasonable limits of *mutual* accommodation along each boundary.

This presents no difficulty in the middle of a large estate controlled by one office, and it would appear to be equally feasible for the local authority similarly to function as the benevolent estate office of its district.

The experience of Scotch architects accustomed to working under the officers of the Dean of Arches with regard to light and air, subject to appeal to the Sheriff's Court, would doubtless be helpful.

The foregoing notes may be deserving of criticism. It is hoped, however, that this will be constructive in the form of suggestions as to what local regulations should prescribe and in what words.

Course in the Science of Building Materials

22 JULY—1 AUGUST

A short course in the science of building materials (with special reference to non-metallic materials) organised under the auspices of the Board of Education was held in London from 22 July to 1 August for teachers in building subjects. For the first time teachers in University Schools of Architecture were permitted to attend, and the Universities of Manchester, Sheffield, Glasgow, Melbourne and University College, Dublin, were represented.

The writer welcomed the opportunity of making contact with teachers in building subjects as well as furthering his acquaintance with the staff and work of the Building Research Station.

The course was admirably arranged and consisted of lectures on cements, concrete and mortar, bricks and tiles, plasters, building stones, bitumen and damp-proofing, decorative and protective materials for plaster, brickwork and cement, and timber. With the exception of the lectures on timber given by Mr. E. H. B. Boulton, M.C., M.A., the lecturers were officers of the Building Research Station.

Visits were paid to the Stewartby Works of London Brick and Forders, Ltd., the new Geological Museum, South Kensington, and the buildings of London University, Malet Street. The meeting which followed a tour of the new R.I.B.A. building by the members of the course is reported on the next page.

Two whole days were given to the laboratories of the Building Research Station, and the director and his staff are to be complimented on the well-arranged displays and talks in the various laboratories, and for the way in which they responded to the many questions. In spite of the heat, they appeared positively to enjoy themselves, and at this time it may not be out of place to thank them for the use of their cricket gear and pitch at lunch time on both days.

These researchers expose so well the failings and shortcomings of craftsmen and architect, manufacturer and material that at times one began to wonder whether there were any sound building materials now in existence. Certainly a good case was made out for a more scientific training for everyone connected with the building industry. The discussions after the various lectures were helpful in bringing forward criticisms and suggestions for teaching building science. Just how much to teach and how to present certain problems is a real difficulty in the artificial life of a full-time education in schools of architecture. Unlike a school of building, where the craftsman comes to learn the answers to problems which he has often asked himself in his everyday life, the student in an architectural school has in most cases to learn about the questions as well as the answers.

The teachers attending the course are indebted to the Board of Education for an informative and stimulating course which was excellently organised by Mr. Martin S. Briggs and pleasantly conducted by him with the assistance of Mr. J. L. Manson and Dr. H. H. Burness.

STEPHEN WELSH [*F.*]

JOINT CONFERENCE OF R.I.B.A. SCIENCE STANDING COMMITTEE AND TEACHERS OF BUILDING SCIENCE AND CONSTRUCTION

A Joint Conference of the R.I.B.A. Science Standing Committee and teachers of building construction and building science in schools of architecture and building was held at 66 Portland Place, London, W.1, on Thursday, 25 July. Mr. T. E. Scott [*F.*], Chairman of the Science Standing Committee, presided.

The CHAIRMAN, in his opening speech, welcomed, on behalf of the Council and the Science Standing Committee, the members of the Conference and explained that the Course which was now being held was the result of a suggestion put forward at a meeting of the Schools Committee of the R.I.B.A. last autumn, when it was felt that something should be done to clear the air of many misunderstandings that exist in connection with the teaching of building science. The success of the course was very largely due to the enthusiasm which the Board of Education in Whitehall shows in all matters connected with technical education, and to Mr. Briggs's keen interest in the subject. He referred to the work being done by the Building Research Station at Watford and emphasised the importance of relating the work of teachers of building science to the work of the various research bodies.

Sir RAYMOND UNWIN: "I am very pleased to open a discussion on science and architecture. We are privileged to belong to, or to be interested in, one of the most important and fascinating industries that exists, as well as one of the most ancient. It is particularly fascinating because it involves not only science but it also involves art; and that art is not confined to the designer or the architect; it has to penetrate right down to the craftsman if we are to have building as fine and beautiful as we had in former days in this country, and I see no sufficient reason why we should not." Sir Raymond Unwin then compared the difference between a stone wall built by a craftsman who really knows his stone, its forms, and colours and capabilities, with a stone wall built under scientific instructions from a clerk of works by a man who has no such craftsman's instinct. "No form of instruction or supervision from above," he said, "can replace in all the different crafts of the industry a real sense of craftsmanship in the workman . . . who must have an instinctive feeling for the right working of his material, and I think it is very important for us to keep that in mind at a time when we are being forced to give more and more attention to the scientific side of the subject.

"The old craftsmen had a sort of local traditional understanding and knowledge of their materials. To-day that local knowledge does not always exist and the result has been that many mistakes have been made.

"It is important for those who are teaching to get as clear an idea as possible of what is the difference between the science and the art of the matter; what are the material utilities and what are those elements which contribute to satisfaction and beauty. When you are thinking in terms of science you must be very clear as to your precise quantities, your compositions, your numbers, measures, and so forth. Your knowledge in all the scientific aspects has to be intensive. But when you are dealing with the artistic side of the problem the conditions are totally different. You have to think in terms of the relations of things to one another.

"I do not think it is often possible for the human mind to concentrate its thoughts sufficiently on both aspects at once. As you know, it is not uncommon in an architects' office to have one partner who thinks in terms of design and relations, and another partner who thinks in terms of business, construction and science; by working together they form a very valuable combination. It is important to realise the difference in teaching; and to recognise where the two kinds of perception have to be used, and how they are to be encouraged in the people who have to use them.

"The problem which is facing the building industry to-day is to find some way of giving the craftsmen such an amount of scientific knowledge about the particular materials they are going to use as will enable them to acquire that craftsman's capacity for handling materials which in the old days was acquired by tradition handed down from father to son, and not by scientific instruction. The extent of knowledge and penetration into the mysteries of different materials is getting so great that it is true to say that education is more and more compelling the expert in any branch to become, what he has so often ironically been called, a man who knows more and more about less and less.

"That kind of education is right in its way; it produces a man who is a thorough expert in some particular subject. For planning and designing work, however, a man has to possess a certain defined, though limited, knowledge about an increasing number of subjects in order that he may bring them into true relations. Those subjects are multiplying in extent and in number, and I do not believe that it is possible for one man to have a scientific knowledge of all the problems, all the materials and all the subjects that have to be handled, and at the same time secure that detachment of mind, that capacity to create through his imagination a picture of new relationships between the different materials, different parts, different shapes, different colours, different activities, or whatever it may be, which is the essence of the designer's work.

"It is because this problem is so difficult that it is so interesting; it is to that that I wish to direct your attention, because I believe we need to think it out in regard to our education.

"The time has come for us to think much more in terms of *quality* and *real values* and less in terms of *quantity*. The problem of quantity has been very largely solved, but we are entering on a time when we shall be forced to give far more attention to *quality*." The speaker went on to say that he was not much impressed by the addition to the satisfaction and enjoyment of life of much of the stuff produced to-day. He instanced the remarkable and deplorable demonstration of quantity production of houses and the growing discontent throughout the country at the absence of quality in those houses which, badly planned, badly built and ugly, are spoiling the countryside. The building industry must be maintained as one which will give scope for good craftsmanship, and he appealed to the people who are employed in teaching to help solve this problem and to decide what sort of scientific instruction should be given to the architect, the builder, or the craftsman, to enable him to understand the scientific side of his work and at the same time develop in each man, according to his function, an instinct for the beautiful side of building.

In speaking of beauty and use, Sir Raymond said that beauty comes from a certain relation and proportion in which things are combined. "The designer," he said, "works in

relations. He is a person who thinks in terms of the relations of one thing to another. As a designer, *whilst he is designing*, he does not need to know much more about a door than the space which it occupies; he does not need to know anything about the chemical composition of plaster beyond the fact that it will make a smooth surface on which he can lay out the decoration of his walls. The designer as a designer is thinking in terms of relations when he considers how his elevations will work out, how the buildings will group together to make a fine street, and how the streets can be combined together to make a convenient and beautiful town. The designing faculty comes in there, and the interest, as I see it, of our building industry is that you have a certain amount of that designing faculty running all through the work. The man who builds the wall, the man who plasters the wall, the man who lays the tiles—all of them can contribute something to the creation of a building which will be serviceable, which will be right scientifically, and which at the same time will be beautiful to look upon and give pleasure to those who see it.

"The subject this afternoon is more especially the relation between science and architecture. I have read with great interest the courses which you are taking, and I think they are excellent and of very great value. I am extremely pleased that this meeting has been arranged, because I think that as members of this industry we have to put our heads together and see whether we cannot save the industry and make it fulfil the best needs of the community on the side of use, on the side of scientific reliability and on the side of creating a beautiful adornment to the country. It is by getting the right scientific teaching and by the ability to give to each person engaged in the industry, according to his function, the right amount of scientific knowledge, with some appreciation of what will be beautiful in the particular job that he is doing, that I think we shall solve our difficulties; difficulties which are great owing to the big inrush of new materials and for many other reasons. In that way I hope we shall be able to keep our industry going and gradually improve the standard of building as compared with some that has been happening recently."

DISCUSSION

A vote of thanks to Sir Raymond Unwin was proposed by Mr. HERBERT LIDBETTER and seconded by Professor LESLIE WILKINSON, who said that he found that the chief obstacle in the way of the scientific education of architects was that they could not spare the time for a really thorough study of every branch of science. It was inevitable that they should become "Jacks of all Trades." He said it was important not to stress science too much; the architect and craftsman should be trained to develop that quality which he described as *feeling*. Architecture, he said, is a state of equilibrium between reason and feeling.

Mr. THORNTON WHITE [*A.*], opening the discussion, endorsed from practical experience with the working of plaster the opinion that the best work is the result of the work of the scientist augmented by the practical experience and knowledge of a craftsman who "had been instinctively a scientist all his life."

Dr. H. H. BURNESS, H.M.I., argued strongly that the scientific approach to building was the right approach. For the last two hundred years science and art have been divorced; and it is important that in modern times they should be combined. Science is merely an investigation of natural laws, and a thing which follows natural laws is likely to be beautiful.

Mr. P. J. WALDRAM [*L.*], speaking of the work of Wren and Hooke as architects and practical scientists, urged that the architectural and building students of to-day should follow their example, and learn by making and using models with their own hands. The use of models by students in the teaching of structural mechanics was the *only* way of learning the subject.

Mr. J. L. MANSON, H.M.I., emphasised the fact that instruction in science for the architectural student, the building student, the master builder, and the craftsman, will each require quite a special development of its own. He pointed out the need for greater accommodation and more equipment for scientific teaching in the schools, and suggested that instruction should be carried to a much higher stage with most of the students.

Dr. DRAKELEY spoke from the point of view of a chemist, and said that his problem was that if you taught an architectural student sufficient chemistry to enable him fully to understand the research into materials being done at Watford, he would almost automatically cease to be a good architect because of the time required to secure that knowledge. The student should be given in training just sufficient knowledge to make him understand what the scientist is telling him.

Mr. N. HOWDILL suggested that it was important that "scientific jargon" should be simplified as much as possible to bring it within the understanding of the ordinary architect and builder. He pointed out that it was the small scientific points sometimes disregarded by architects and builders, which are so often the expensive errors in a building and which cost the most to put right.

Sir RAYMOND UNWIN defended himself against the charge of advocating a divorce between science and architecture. He advocated, on the contrary, "a happy marriage between two parties that are different." As a designer, planning the whole, the architect should not concern himself with scientific detail, but as a business architect he should be responsible for the efficiency of the whole range of subjects involved. Few brains are able to handle all the different sides of the problem, and that is where co-operation comes in.

Mr. MARTIN BRIGGS [*F.*], H.M.I., suggested that in the past science and architecture had drifted apart when the architect ceased to be interested in plain straightforward building and became a sort of "style merchant," involved in architectural revivals and controversies of style. With the spread of modernism in schools and in practice science and architecture were coming together again, but the problem now was how to define the educational needs of the architect; for the benefit of the teachers a clearer definition must be made of the functions of all the people engaged in the building industry. He emphasised the value of the co-operation of the Institute, and particularly the work of the Science Committee and the Board of Architectural Education, and concluded by moving a vote of thanks to the Institute, to the Science Committee, and particularly to the Chairman, Mr. T. E. Scott.

The CHAIRMAN, replying to the vote of thanks, said that the chief problem as far as building science was concerned, was to decide not how much they could teach students, but how little was sufficient to enable them to maintain a proper liaison with experts. In connection with this he said that many young architects and builders, far from understanding the extensive research carried on by the Building Research Station, did not even know it existed. As chairman of the Science Committee he very much hoped that it would be possible to hold a similar Conference later on.

Building Societies and Building Standards

BY STANLEY C. RAMSEY, F.R.I.B.A.

A PAPER READ BEFORE THE CONGRESS OF THE NATIONAL ASSOCIATION OF BUILDING SOCIETIES ON 13 JUNE 1935

It was with some trepidation and a great deal of pleasure that I accepted the invitation of the Council of the National Association to address you on this subject to-day. I realise that a great many of you—if not all—know far more about the subject than I do, but I have always found that an audience of experts is one of the most generous and I must claim your indulgence now for the manifold shortcomings in my paper.

The subject of building standards is one that has interested me long before I had the good fortune to be associated with the building society movement, and I consider that in its wider aspects it is still one of the most important, not only for the Building Societies but for the nation as a whole.

Perhaps there is something fitting in the fact that an architect has been chosen for this difficult task, because I believe it was an architect who first initiated the modern practice of building for sale.

When Robert Adam, the designer of many of our stately country houses of the late eighteenth century, developed the Adelphi site as a building speculation, he inaugurated a new method of dealing with the provision of houses which has had very wide repercussions on the work which the Building Societies have to undertake to-day. Adam was followed by many imitators, not all of whom built as well as they designed. The period of the late eighteenth century was one of the most charming and refined in the history of our domestic architecture, and some of the houses were the worst built.

There was, however, this difference, that up to the beginning of the industrial period, any new building or group of buildings was usually hailed as a delightful enrichment to the countryside, whilst to-day building is for the most part looked upon as some sort of desecration. Yet many, probably the great majority of the houses built for sale to-day, are of an infinitely higher standard of construction than those of the pre-industrial period.

The reasons for this glaring contrast are, I submit, many and various, and my excuse for this somewhat excursive and historical introduction must be that unless we have some comprehension of the social forces that are behind the machinery of supply, we cannot hope to arrive at what standards of building are desirable and practical. As surveyors, I take it that we shall have no difficulty in arriving at the conclusion that certain standards of construction are not only desirable but essential to the safety of the building society movement.

However keen the competition for business amongst the units of our movements, none of us, I am sure, wants to compete for the "shoddy" and the badly built.

A movement for a standard specification setting out the minimum requirements below which we could not go perhaps depends to some extent on the much larger and more important question of co-operation, and is outside the purview of our discussion to-day.

Probably such a movement could be best inaugurated by an agreement between the representative bodies of the Building Societies, the Building Trade and the Architectural Profession, and there are rumours that such a movement is already taking practical shape. However, I should like (with your permission) to take a much wider view of the words "Building Standards" than can be embraced in a specification dealing with standards of building and construction. As an architect, I am sure you will expect me to say something about the design of our houses and that you will be polite enough to stifle your yawns if I should dwell too much on this aspect of our problem.

The late Sir Patrick Geddes, the sociologist, in his book *Cities in Evolution* and in his numerous other writings, propounded a theory which he described as the passage from the palæo-technic to the neo-technic, which, if I understand him aright—and he is by no means always easy to understand!—implies passing from the crude social standards of the early and middle years of the nineteenth century, an age of coal, to the more exact and scientific standards of the twentieth century, an age of electricity.

The one was a period of approximation, the other is tending towards a period of exactitude, and these differences are and will be to a greater degree even than now reflected in the standards of our buildings.

In the novels of Charles Dickens, the great humanist, we get a graphic picture of the earlier industrial period, a period of transition from an agricultural to an industrial age when young children worked in the mines and factories and both men and women were expected to work at looms and in workshops for unconscionable hours.

In its more unpleasant aspects it was a time of Gradgrinds and Bumbledom doing their worst in an atmosphere of fog and gin. It was also a period of great energy and great achievement, when vast wealth was accumulated, when huge, if ugly, towns were developed, and when a great commercial fleet with its accompanying harbours and docks was brought into being—in a word, it was the prelude to the modern age.

If we desire a contrast we have only to turn to the

novels of, say, H. G. Wells, with their insistence on science and the need for planning.

During the nineteenth century, our industrial population grew at so rapid a rate that our housing had to some extent to be improvised, and if it was a period of muddle and untidiness, it also contained within it the germs of a better and fuller life for the mass of the people.

It is interesting to reflect that it was the industrial north, not the more residential south, that first concerned itself with the problems of Town Planning, and that it was to the generosity of a great industrialist, the late Lord Leverhulme, that we owe the first chair of Town Planning which was inaugurated at Liverpool University some twenty years ago, as well as one of the first of our Garden Cities—Port Sunlight.

At the present time one of the chief difficulties that we have to contend with is that the three principal agencies that should be used for the purpose of obtaining higher building standards have been working along different and at times divergent lines.

Until quite recently, I think it would not be unfair to say that the Building Societies have been too much concerned with the financial aspect, which of course must always remain their chief consideration, but which cannot, I suggest, be divorced from other considerations; the builders who have perhaps been too much concerned with the purely practical and material aspects of their problems, and the architects, the trained designers, who have been far too much concerned with the purely æsthetic side of building.

It is easy to see how such a position has arisen—not so easy to suggest the remedy. That the architects during the last thirty years should have been so much concerned with æsthetics is perhaps easier for an architect than a layman to understand.

It is an easy and profitless task, except as a guide to the future, to criticise the march of events and to suggest that history would have been so much better, if certain passages and chapters could be omitted.

In the reaction from much that was ugly and depressing in the buildings of our nineteenth-century industrial developments, we—that is, the architects—turned, as had the writers such as Sir Walter Scott and the elder Dumas, to the earlier historic periods for inspiration.

As the Archbishop of Canterbury said the other day, our cathedrals and our villages are among the most beautiful things that this or any other country has ever produced.

This absorption in the past, which was probably a very necessary stage for better development in the future, did undoubtedly help to blind us as a profession to many of the social problems of our time.

If people wanted to live in small houses, why not produce, or attempt to produce, the beautiful cottages of a past age with their fascinating thatched or hand-made tiled roofs and their small leaded casement windows? And this is in the main what we essayed to do, but the public, or perhaps I should say publics, for which the Building Societies exist, are in the main not composed of cottagers or those who desire to become cottagers. The reaction against the typical architect's solution of the problem was no less sure because the reasons may have been obscure.

A rapidly industrialised rural community used to an open-air country life, had found that one essential feature of a town house was large windows to let in the sun and air; and this the builder who built houses for sale gave his public, whose taste and wishes he had perforce to study. Even in my own very conservative profession, we have felt the urge of this confused and confusing modern world, and some of our younger architects are now being criticised not for the smallness of their windows, but for their extreme size!

Now we will pass from the architects, with their many shortcomings, to the builders. I have indicated in the opening passages of my paper when dealing with late eighteenth-century houses, that good design did not necessarily mean good building, and the same criticism holds good to-day, but with this difference, that although a great many (I suggest, the vast majority) of the houses built by private enterprise do, from the practical and constructional viewpoint, give full value for money, far too many of them ignore the wider social implications contained in the words "good design."

I have sometimes felt that the outcry against ribbon development, admittedly an uneconomic and wasteful form of development, has been sharpened in its intensity by the character of the design of the small villas and bungalows strung along those magnificent arterial roads which rival and surpass any of the roads so proudly planned by the ancient Romans. As a well-known Cabinet Minister once said when dealing with this vexed question: "What a man does with the inside of his house is his own affair, but what he does with the outside is his neighbour's."

Some discerning critics have pointed out that the builder in humbler and more untrained fashion is only doing what the architect has already done—he has, with his mock-Tudor, arrayed his modern creations in fancy dress—though sometimes of a rather tawdry nature!

That good design in housebuilding is well worth while was brought out in the discussion following the speech of Sir Raymond Unwin, the then President of the R.I.B.A., when he addressed the Building Societies' Congress on this subject two years ago. Several speakers who took part in the subsequent discussion were at pains to point out that during the recent financial slump and the fall in the values of house property, houses in Hampstead Garden Suburb seldom suffered a reduction on re-sale of more than 5 per cent., and in a great many cases actually appreciated. Hampstead Garden Suburb is, of course, the outstanding example of suburban development which aimed at the creation of amenities by the control of design and the employment of the principles of Town Planning. It must be remembered that many of our estate developments which run into hundreds of houses are larger, considered as a social unit, than many of our

villages, and the question at once presents itself as to whether the future development of such estates should not be along the lines of planned community centres which would utilise existing amenities and create new ones to the fullest extent for the benefit of the people who are to dwell within their confines.

If the building industry, and by the use of these words I mean not only the builders but the building societies, architects, estate agents and building owners, can do this by working harmoniously together without the spur of compulsion, then we shall have given a triumphant answer to those critics who state that private enterprise is on its trial.

It is, however, in a review of this order, just as well not to forget that such a spur or spurs exist, and that local authorities have in addition to their powers under the various Town Planning Acts, the added power of the control of elevations given them by Clause 12 of the 1932 Town and Country Planning Act.

I have already dealt with architects and builders. What now of the Building Societies?

Admitting that Building Standards are desirable, is it possible for the societies to insist on such standards and to what extent can they carry such insistence?

I know many zealous and well-meaning persons who have studied this subject somewhat superficially, who point out that as the Building Societies find the money they can call the tune, but this, I think, is only partially true. As I have said, by the aid of co-operation there is little doubt that we could agree and enforce a minimum standard of construction, but to what lengths we could go in the direction of improved design, using the word in its æsthetic sense and towards the direction of increased amenities, by the insistence on site and community planning, is to open up a very large and debatable question.

As our chairman, Sir Harold Bellman, said at a lunch of the National Association of Building Societies which had the honour of an address by Sir Percy Hurd, the chairman of the Central Panels Committee of the Council for the Preservation of Rural England, "We do not build houses, we only lend money to those who wish to buy houses"—I am quoting from memory without the words of Sir Harold before me—"and however sympathetic the societies are towards higher standards of design they cannot act too far in advance of their public without defeating the object they have in view."

This is only too true. I have been very interested in the mental processes that many genuine critics of modern building go through when they are dealing with this question.

Their first line of attack is on the builder—"Why does he build such 'ugly' houses?" Their second line on the building societies—"They largely finance the builders, so why cannot they insist on a higher standard?" The next the public, who like these "ugly" houses—"Why can't they be made to want something better?"—and even the architects come in for their share of the blame for neglecting such education.

All of which goes to show that the problem is not the simple one our critics would have us believe, but an extraordinarily complex and at times a baffling one for which there is no one remedy.

As Emerson has pointed out in one of his essays, all life is the same and the different manifestations of a particular period are only variants of the same statement. Many observers of our social tendencies, including Sir Hilton Young, the present Minister of Health, point out that one of the most hopeful signs is the undoubted improvement that is taking place in the design of these small houses.

Those who care to visit such places as Edgware, to give the name of one of our most modern suburbs, are at once aware of an improvement in building standards both as regards construction and design as well as from the standard of site planning.

Along the electric lines of our tube railways which are penetrating ever deeper into the countryside, are appearing the forerunners of Sir Patrick Geddes' "neo-technic" houses, and if they are not the "all-electric" houses of an electric age they are well on the way.

I have left what is possibly the most difficult question of all until the last, and that is one which peculiarly affects our societies, I mean the all-important question of selling price. No matter how well built your houses, no matter how well designed, the problem will not be solved unless the well-built house and well-designed house can be produced at the proper market price, and here we come at once to the controversial question of mass production.

To many the very term is anathema, and yet there has always been some element of mass production present in the building of our houses. To give perhaps the simplest example, that of bricks, these have always been the product of some kind of mass production, and now we have doors, windows, fireplaces and sanitary units, all the products—and very good products—of mass production. To what further lengths can be go in the direction of mass production and yet retain those essentials in our buildings which make for better, healthier and happier homes? This is one of the problems that is awaiting our solution. We live in a machine-made age, when the machine can be made the servant, or as is unfortunately too frequently the case, the master of man, and the answer I suggest to you depends on the amount of determination and goodwill we are willing to bring to the problem.

What we have done once we can do again, and I submit there is no reason should we so desire, provided our desire be strong enough, why the people of our towns, our suburbs and our rural areas, should not be housed in beautiful and well-built homes, planned as units of well-designed towns, suburbs and villages, as good or better than any other age has produced.

I have not been able with the short time at my disposal to do more than touch on a few aspects of this vast subject, but I shall be happy if I have been able to indicate some of the principal problems which we have to consider even if, as I am afraid is the case, in a rather vague and inconclusive fashion.

Architectural Practice

BY SYDNEY TATCHELL, F.R.I.B.A.

A PAPER READ BEFORE THE GUILDFORD DISTRICT CHAPTER OF THE SOUTH-EASTERN SOCIETY OF ARCHITECTS ON 9 JANUARY 1935

We may, I think, congratulate ourselves on being members of the most fascinating and at the same time one of the most responsible professions. The variation in our work, the entire absence of monotony, and the stimulus which one derives from creative effort combine to make our professional work a pleasure rather than a labour. On the other hand there is no other professional man who is entrusted by a layman, his client, with such large sums of money to expend, and it is only the integrity, experience and sound judgment of the architect which stand between his client and possible disaster.

PRACTICE AS IT WAS

Before embarking on the details of practice it may be useful if I refer for a moment to the changes which have been brought about in our work as the result of altered conditions of life generally during the past thirty or forty years.

I had the good fortune to be a pupil under the old articled system in the office of a busy London architect, a man who combined great architectural knowledge with sound business ability. I can look back on that office and remember that the telephone had not yet come into general use; the typewriter was looked upon with grave suspicion by every professional man; photo-printing had not been heard of; and the most lasting impression I have of my pupilage days is of life running very smoothly and almost leisurely. Our work was done with great deliberation and thoroughness; all our drawings were prepared on Whatman hand-made paper, and if duplicates were required they had to be prepared by hand; specifications were of abnormal length; and we took as long to prepare the designs and working drawings for a building as to-day we should require for its actual erection and completion.

The London Building Act had only just come into force and we were beginning to learn how to set about dealing with a party wall. In short, life has been speeded up, and the professional man's office to-day finds, as part of its normal equipment, telephones, dictaphones, typewriters, filing cabinets, with a nearby photo-printing office which can produce copies of his negatives in an hour or two. Whatman paper is practically unknown except to one or two of our leading perspective artists, and an architect to-day is expected to prepare a sketch design between the telephone message which he receives from his client in the morning and posting time in the evening. Working drawings and bills of quantities are expected to be ready in a month or six weeks; the building to be finished in six months, and the tenants to be sued for arrears in rent within twelve.

PRACTICE TO-DAY

On a man's arriving at the stage when he is qualified to practise he must have acquired a sound knowledge of, at any rate, the theory of his job, either as a pupil in an office or—what to-day is perhaps the more satisfactory method of training—as a pupil in one of the recognised schools of architecture. He will have received his education in the theory, traditions and history of architecture. Presumably also he is possessed of some capacity for design and has imaginative faculties which enable him to present it in an attractive manner. These may be said to be the foundations upon which the superstructure will depend. Now what are the qualities which make for a satisfactory superstructure? I think they may be summarised as personality, character, tolerance and a sound knowledge of and a sympathy with one's fellow men. Then there are what I may term the loyalties. Loyalty to your client, your contractor, yourself, to your brother architects, and above all to the Royal Institute of British Architects which is your father and mother and elder brother. These may be termed the greater loyalties. There are other loyalties which are of equal importance, those to your staff, your craftsmen, your sub-contractors and workmen. No mean list of qualifications you will say, but I am sure that none of us who has been in the "rough and tumble" of practice would say they are unimportant.

THE APPROACH TO THE JOB

I am speaking to you not as one of the brighter stars in the architectural firmament but as a general practitioner whose good fortune it has been to come in contact with many of his brother architects similarly placed, who are dealing day by day with the problems of everyday practice. Many of these problems we create for ourselves, due in many instances to lack of clear thinking. We are too apt to approach our tasks without remem-

bering the simple directness and honesty of the early builders. Professional life is admittedly far more complicated to-day than even twenty or thirty years ago, because of the conditions imposed upon us by lawful authority; but it appears to me that an architect should cultivate so far as is humanly possible in the creation of each building and for the solution of each problem with which he is faced something of the calm unhurried manner of the surgeon about to perform an operation, who realises that his object is to save the life of the patient. The architect's job is to give to his client services, for which he is paying, in the most complete and effective manner possible.

That brings me to the first fence which has to be surmounted at the commencement of almost every job, and that is the question of fees. In the minds of many architects there is a feeling of delicacy and hesitancy in the mention of finance. It seems to me (and my own experience bears this out) that the average client is definitely grateful to the architect who at the outset hands to him with suitable explanations the little book containing the conditions of employment and the Scale of Professional Charges issued by the Royal Institute. If the client "jibs" at this stage it is better to have these matters discussed and agreed at the outset rather than trust to luck that everything will turn out all right at the finish. The same remarks apply to the importance of disclosing to your client without fear the probable cost of the job. Many clients approach you with a preconceived idea of accommodation, which bears little or no relation to the amount they are prepared to expend, and it is one of the tasks which calls for the exercise of extreme tact to inform the client that either his accommodation must be reduced or the contemplated expenditure increased.

If a building is projected in London or the provinces it should be a matter of routine to ascertain who your neighbours are and if they are in any way affected by the proposed building operations; and in the case of London to serve the necessary notices in good time. The preparation of plans and formal submission to the London County Council or Local Authorities should be preceded, in my opinion, by an unofficial approach to the chief of the department concerned. This is where the psychological side of our work comes in. We are all susceptible to little attentions of this kind, and the official is not born yet who does not feel in some degree that the importance of the office which he holds is enhanced when the architect, with all due modesty, approaches him with the request that he would like the official eye to be cast over his work, so that when the plans are formally brought to his notice he may find it easy to recommend their approval by his Committee or Council.

I need not, of course, stress the importance of ascertaining that you are not supplanting another architect in any job. Here, again, if you have any reason to suspect that an architect has been previously employed the information can quite tactfully be extracted from the client and a friendly enquiry made of your brother architect to make sure that his services have been properly terminated. This will save an infinity of trouble and incidentally will render your appearance before the Professional Conduct Committee of the Royal Institute of British Architects unnecessary. When you have overcome these preliminaries and are getting ready for the bills of quantities (which I would impress on you all is to my mind in these days an essential of every job costing more than £500) do not expect your surveyor to prepare useful bills of quantities from hurriedly-made and incomplete pencil drawings. He, like yourself, is a man with a very responsible task, and cannot successfully fulfil his part in the programme unless he is provided with all the essential material, so that in turn the contractor in tendering may have before him a bill of quantities which enables him to visualise fairly and accurately the full extent and nature of the work for which he is to prepare a tender.

ORGANISING THE CONTRACT

We now arrive at the stage when the architect's real qualities are put to the test—the handling of the job during progress. You may regard it as a "counsel of perfection," but I would urge upon you as far as possible to aim at the position which enables you, on the signing of the contract, to hand to the builder the complete working drawings with duplicates for the foreman, the half-inch details and the full sizes. The builder and his foreman may take a few moments to recover from the shock, but I would venture to predict that from that moment you are their man, and their devotion to the job and their respect for you will be a gratifying return for your labour. Contrast for a moment this state of things with the unfortunate builder who is supplied with a bare set of eighth-inch drawings and a sketchy specification and who, for fear of upsetting the architect, refrains from pressing for details, or who at the best is "spoon-fed" with odds and ends of drawings in no ordered sequence and probably at variance with the quantities or the specification or both. Without labouring the point unduly, I do stress the importance of the builder being put in possession of all essential drawings when the contract commences, for thereby he is enabled to organise his shops, his materials and his men.

What about the client who cannot make up his mind? I know him well. This is where the personality of the adviser comes in. It must never be overlooked that you are employed and paid to advise the client, and the client is not the adviser but the consultor. This fact can be put quite nicely and tactfully to the client with the reminder that any delay in settling essential details will entail additional cost.

The architect on the works should be courteous and considerate to every man on the job. Get to know the men—let them feel that you and they are co-operating—give a word of commendation when it is justified—and

never, never criticise the foreman or the clerk of works in the hearing of the men or each other. Make it clear to the clerk of works that he is your eyepiece and not your mouthpiece; and never omit the prefix "Mr." when addressing the foreman.

At the commencement of a job endeavour whenever possible to prepare a progress chart. It can readily be done in consultation with the builder and the quantity surveyor. It is of immeasurable help towards the smooth working of the building. Let your client have a list of dates with the approximate amount of certificates to be issued, at the signing of the contract, so that he may make his financial arrangements to meet them. Do not issue certificates at odd times, but arrange that they are made out on a fixed date each month and instruct the builder, the sub-contractors and the quantity surveyor to have their statements before you a few days in advance. Keep abreast with the job both in regard to details and costs so that the settlement of accounts can be reached within the shortest possible time after completion. Don't be fearful of letting your client know the cost of extras as they are incurred. He will be more than grateful. Most of the troubles which arise between client and architect are due to the fact that the client is not made aware of the cost of the variations or additions which are made as the result of his instructions given or implied. Both the client and the builder are entitled to a "square deal" and the architect alone can hold the balance—and upon his firm and fearless judgment depends the success of the work.

ORGANISING THE OFFICE

May I now refer briefly to the organisation of an architect's office. Correspondence should be carefully kept. Letter-books as well as carbon copies are desirable in order that the sequence of dates should be beyond challenge. A filing system should be used, which becomes your servant and not your master. A drawing register should be kept in which is recorded the number, title, scale and destination of every drawing and every copy, and in this connection I would stress the undesirability of inscribing the client's name on your drawings. In my opinion the relations between an architect and his client should be regarded throughout his office as strictly confidential and his name, however distinguished, should not be available for all and sundry to see and note. A simple system of book-keeping on the loose-leaf ledger principle should be maintained, and last, but not least, a careful diary should be kept with notes of interviews and visits so that in the unfortunate event of your having to appear in the Law Courts your office records may be referred to with some measure of confidence.

POINTS OF PRACTICE

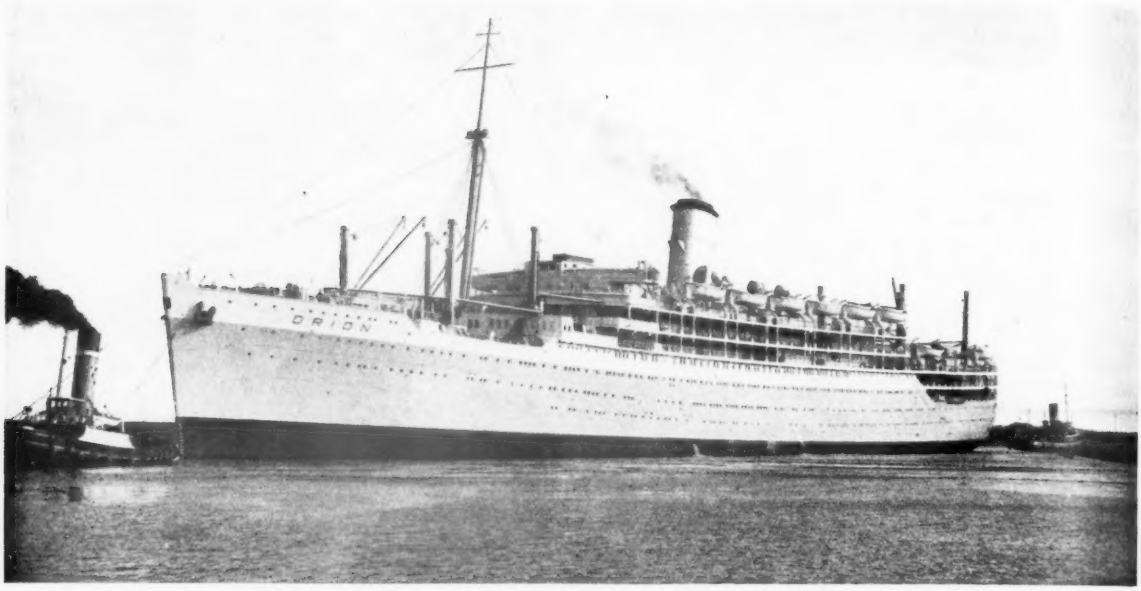
Having dealt with the relations between the parties to the contract, I will now briefly touch upon our relations with one another. In the course of general practice we are bound to meet as "opposite numbers," in connection with adjoining properties, party walls and light and air matters, members of our own profession. I have already referred to the client who cannot make up his mind. There are many architects in like case. Your opposite number who, for example, is uncertain of his position and takes refuge with his client's solicitor. Firmly, but tactfully, point out the error of his ways. Stress the point that technical matters are being dealt with about which the legal mind is a complete blank, and endeavour by every means in your power to persuade him to stand up to his responsibilities.

Do not for a moment suppose that I regard the legal adviser as superfluous. On the contrary, there are times when it is unwise and indeed highly improper for an architect to adventure into the province of the lawyer. The moment when legal intervention is desirable is necessarily a matter of wise judgment, but I would advise you always, if trouble is brewing, to get advice early.

I have often been asked whether specialisation in practice is to be recommended, and as a general observation I do not think it desirable. A man's practice develops in strange fashion, and the question of specialisation usually answers itself. The general practitioner may find that schools, or churches, or factories, or shops, or domestic work provide him with exceptional opportunities for mastering the special technicalities associated with these divisions of work, but in my opinion it is not altogether a good thing for a young architect especially to get a reputation for one particular branch of practice, as it is apt to exclude much useful "bread and butter" work which, after all, is the main standby of the general practitioner.

In these somewhat disjointed observations I have but touched the fringe of the subject, but you will have, I hope, noted that I have endeavoured to deal with fundamentals. What I should like to leave with you as a final impression is that we have the good fortune to be members of a great and noble profession—one that has for its main purpose the housing of the world, its people, its commerce, its education, its healing, both spiritual and bodily, and it is our task to see that no act of ours as members of this profession lowers its prestige in the eyes of the public or in the eyes of our brethren. It is not an easy code, but one, indeed, that demands for its due performance much sacrifice, infinite patience, and an almost divine tolerance. Its human side will be found to afford one of its principal joys—the meeting with one's confrères—the exchange of views, the interest in the other man's job—in short, the study of human psychology—that study which has for its reward the easy handling of your fellow men.

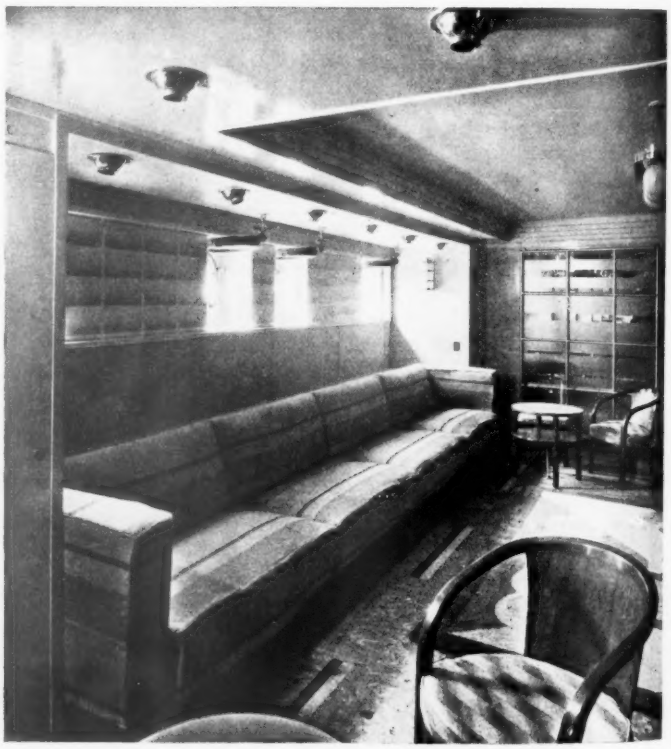
We must ever keep in mind that we are members of a Royal Institute whose influence and prestige throughout the world have never been greater than they are to-day. Upon each one of us is laid the responsibility and pride of maintaining this heritage won for us by generations of men possessing great vision and high ideals.



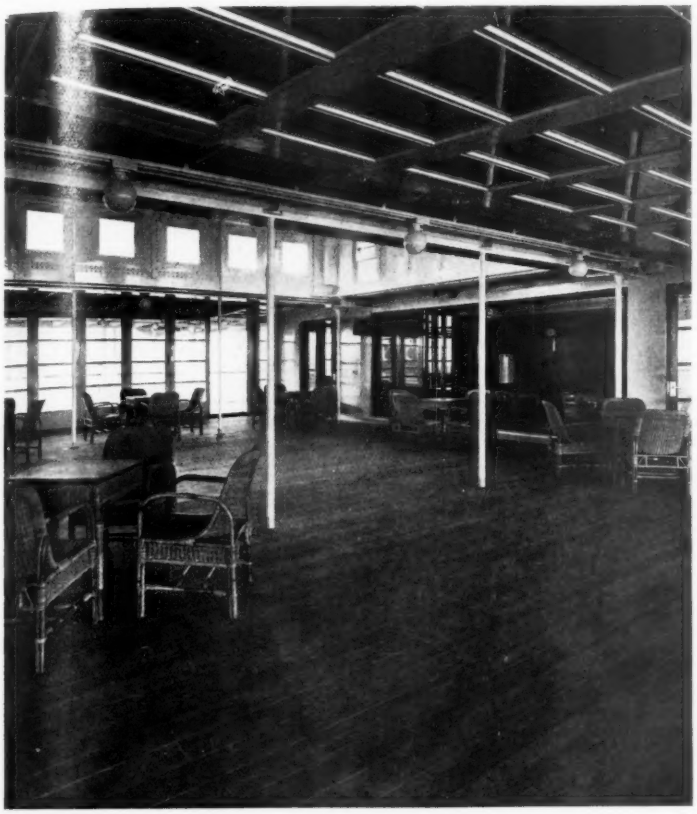
R.M.S. "ORION"

Decorated by Brian O'Rorke [*A.*]

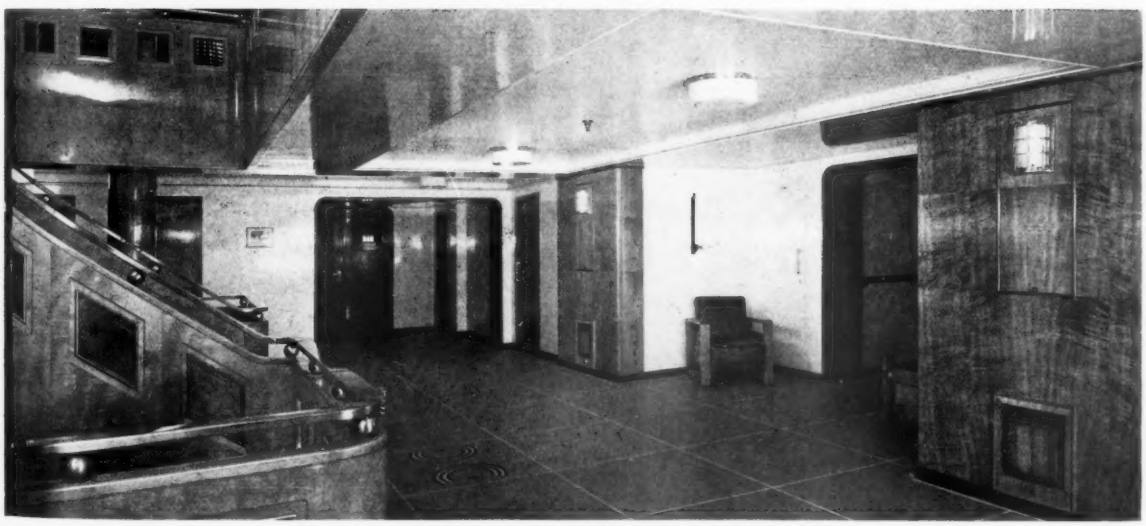
The work of Mr. O'Rorke in *Orion* is of interest partly because, as an architect, he was given complete control of the decoration, furnishing and equipment of the interiors, but principally because he has aimed at and succeeded in giving a ship-like character to the whole. These illustrations are given as typical of the whole interior design. A general note will be found in the editorial columns.



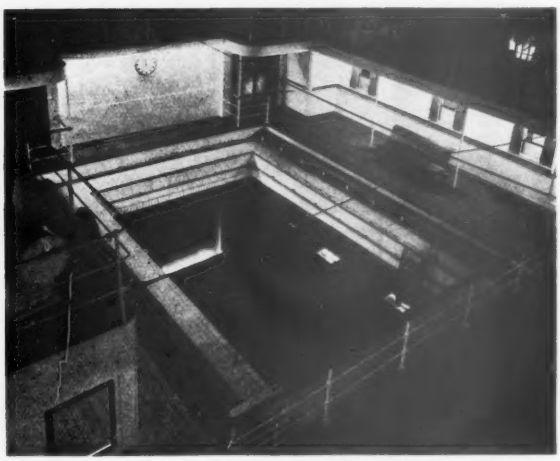
Part of the Tourist Lounge which is decorated mainly in tones of green. The chromium-plated ventilators are frankly incorporated in the decorative scheme

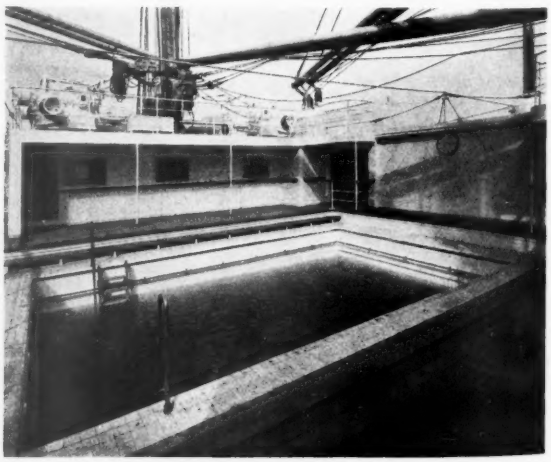


Left: The dancing space which can be opened by accordion-folding glazed screens to the decks on either side and also to the After-Gallery at one end. Below: The First Class After Stairway showing a typical use of light coloured veneers, metal and plain surfaces

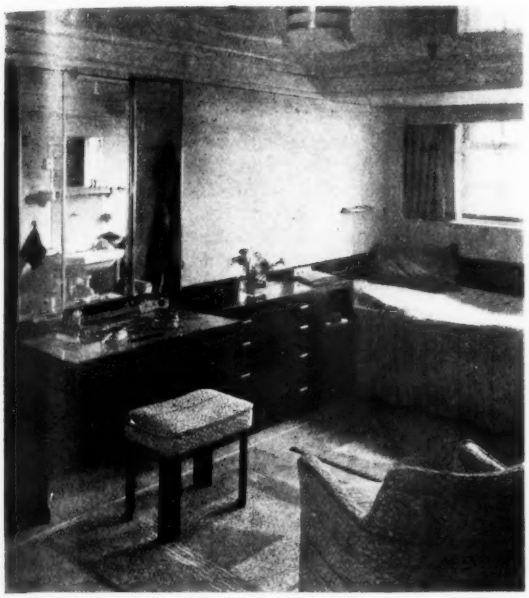


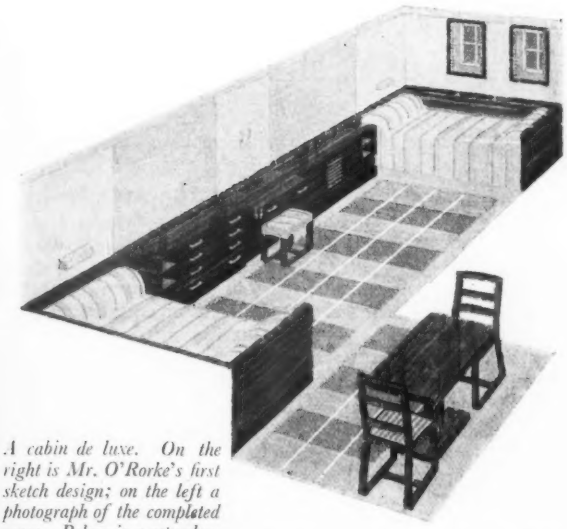
The Café is in greys and greens with white pipings and bright metal. The centre piece of the room is an illuminated painting by Mr. Tristram Hillier



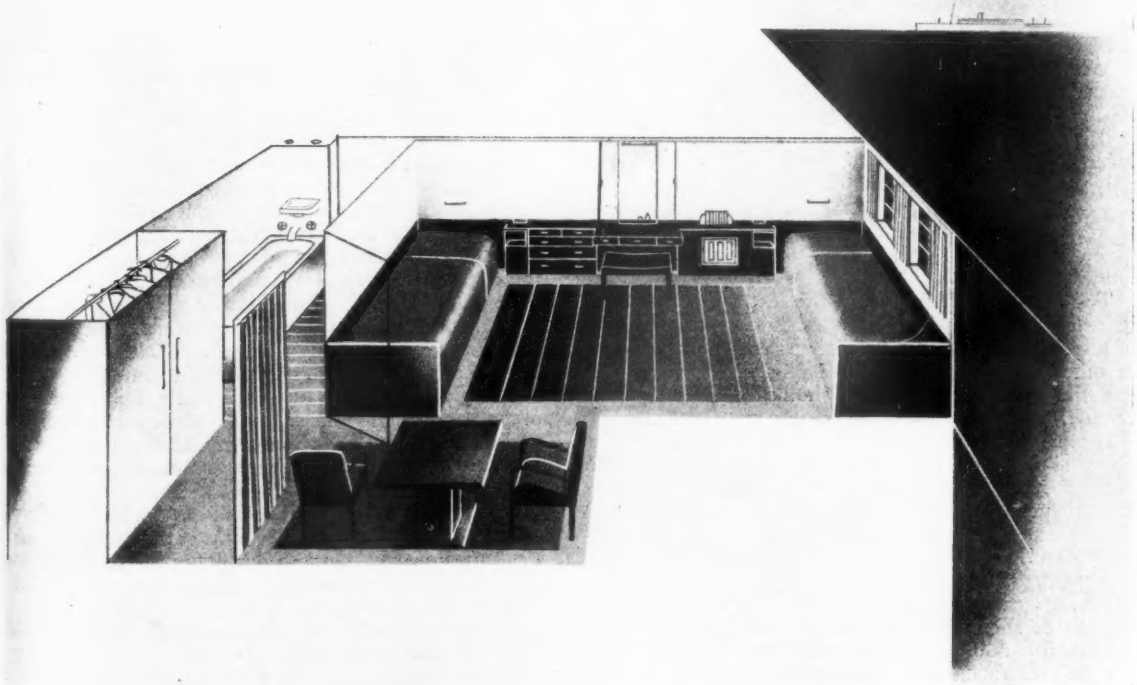


The First Class Swimming Pool by night and by day. The design harmonises with the surroundings and is emphasised by good colouring





A cabin de luxe. On the right is Mr. O'Rorke's first sketch design; on the left a photograph of the completed room. Below is a reproduction, taken from the descriptive brochure, of a drawing by Mr. Ceri Richards, illustrating the room. The drawing, which is in colour, will be of interest to draughtsmen



The Work of the Berks, Bucks and Oxon Consultative Committee of Architects, Builders and Quantity Surveyors

BY STANLEY H. HAMP, F.R.I.B.A.

As chairman of the Consultative Committee for Berks, Bucks and Oxon, which was established in May of last year, I welcome the opportunity now afforded me of giving an indication of the purposes for which it was formed and the activities in which it has been and still is engaged.

It had been apparent for some time that the day had arrived when there must be a closer collaboration between all branches of the building industry, and I realised this proposed consultative committee would be an excellent opportunity of bringing about the desired result. It certainly must be in the interests of the building public when a proper understanding and relationship exists between the various branches of the building industry. The best results can only be obtained when there is confidence and a feeling of fairness between the partners of an undertaking. It is not and never can be in the best interests of the building public if the builder is not paid a fair price for the work, so that he may carry out the architect's instructions to the best of his ability. Neither is it an advantage to the architect or surveyor when, through unfair competition or perhaps for the lack of a bill of quantities, the builder gives too low an estimate for the work. The sooner it is realised that all good work must be paid for at a fair price the sooner we shall have better buildings and more contented workers.

Within the short time the committee has been in existence it has been increasingly apparent to me how misunderstandings and difficulties can be cleared up and satisfactorily dealt with round a table where the several branches of the industry meet. I believe it is only possible within the counties themselves. Each district has often its own difficulties, and when it is possible for representatives of that area to meet, and in a friendly way express their views, satisfactory results are bound to follow.

To-day, more than ever in the history of this great industry, is it essential that there should be a recognition of all the present-day difficulties to each section of it; in other words, for friendly relationship to exist it is essential that the best services should be given by each branch.

It was with the purpose of giving effect to what is above stated that our consultative committee started their labours. It was realised that it would be necessary to deal first with some of the immediate problems and at the same time prepare the ground for the development of other measures likely to be beneficial to the industry.

It was agreed that for the first year the chairman of committee should be an architect member, the vice-chairman a builder member, and that the second year the chairman should be a builder member and the vice-chairman an architect member, alternating every twelve months. The committee consists of six architects, two quantity surveyors and six builders, two architects and two builders being representatives of each of the three counties in the committee's area. These representatives are elected by the Berks, Bucks and Oxon Architectural Association and the local associations concerned in the Southern Counties Federation of Building Trades Employers. Meetings are held in each county in rotation. It is understood that all members can be perfectly frank in their contribution to the discussion on all matters which come before the committee.

At the first meeting it was decided that matters for consideration should fall within the following limits:—

(a) Matters which create or tend to create friction between the organisations concerned.

(b) Intimations of impending changes of policy, procedure or methods current in the industry.

(c) Consideration of technical matters affecting the industry, namely, provision of an adequate and properly trained personnel, allocation of classes of work so as to avoid demarcation disputes, the better selection and specification of materials, consideration of time and progress schedules.

(d) Experiments with and adoption of new kinds of materials, including their modes of introduction and their appropriate relationship with the building industry.

It was recognised that if the branches represented at the committee were to speak with the necessary confidence that, as far as possible, all practising architects in the counties should be qualified as registered architects and that all builders working in the counties should be members of the Southern Counties Federation of Building Trades Employers; only thus could the workings of the committee produce the most satisfactory results. For that reason the first matter that came up for discussion was that of reciprocity between architect and builder. The following resolution was adopted: "That this consultative committee, recognising that the interests of the industry as a whole will best be served by the co-operation of the Berks, Bucks and Oxon Architectural Association and the members of the Southern Counties Federation of Building Trades Employers in these counties, recommends as follows:—

(a) Steps to be taken by the builders' representatives on the committee to strengthen their organisation, particularly in those localities where the existing degree of membership renders the contemplated reciprocity impossible at present; and further, that the builders' side of the committee arrange for the circularisation of their members, calling upon them to exert their influence to the utmost to have work

carried out under the supervision of members of the Berks, Bucks and Oxon Architectural Association; and

(b) That the members of the Berks, Bucks and Oxon Architectural Association be invited to undertake to confine their invitations to tender to members of the Southern Counties Federation, save where at the date of passing of this resolution the degree of organisation is insufficient to render this practicable for the time being.

The next matter was the establishing of a limit beyond which architects should neither invite nor builders be required to submit tenders in the absence of bills of quantities. This was the subject of considerable discussion. The outcome of the committee's consideration of the question was the issue of a recommendation to both architects and builders intimating that a limit of £1,500 had been fixed above which quantities would be necessary, save in those cases where not more than two contractors were invited to submit a tender. Whilst it has not always proved possible to operate this arrangement without a little give-and-take, it is gratifying to be able to place on record the loyalty with which this arrangement is in the main being operated by all concerned.

The attention of the committee was called to the need for ensuring that the 1931 form of contract be used without having been submitted to varying degrees of mutilation. The outcome of discussion of this point was a recommendation to the Berks, Bucks and Oxon Architectural Association in the following terms:—

(a) That the Berks, Bucks and Oxon Architectural Association requests its members to use as standard the 1931 form of contract (issued jointly by the Royal Institute of British Architects, the National Federation of Building Trades Employers and the Institute of Builders) without any alterations to its clauses, except as provided in the document; and explains to its members that a joint tribunal of the issuing bodies of this document deals with any amendments that may be found desirable under working conditions;

(b) That contractors invited to sign a form of contract other than the 1931 form, or a mutilation of the 1931 form, shall (excepting where the employer is a local governing body) report the matter to the secretary of this committee, whereupon the chairman and vice-chairman of the committee will use their good offices in an endeavour to secure the use of the 1931 form or an unaltered copy of it as the case may be;

(c) That contractors finding themselves under compulsion to sign a form of contract other than the 1931 form, or a mutilation of the 1931 form, shall at the time of signing intimate their intention to report the incident to this committee in accordance with the obligation imposed upon them by this resolution.

There were definite and strong views expressed at the often unpractical phraseology of architects' specifications, which are often out of date with modern materials and present-day practice and were so often the cause of misunderstanding.

It was felt that the only practical way to meet the criticism would be to draw up in modern phraseology standard paragraphs to be incorporated in specifications for the work of the different crafts. It is an ambitious task, but already model specifications have been drafted for timber, reinforced concrete and stone. Similar work in respect of plastering, plumbing, clay products and painting are nearing completion. When these specifications are complete it is proposed that they should be issued for the service of the profession and the industry.

Another matter brought up for discussion was the unfair position in which an architect and builder often found themselves by reason of the lack of attention to a new building by the owners during the first few months of occupation, and the committee drew up and have had printed a document entitled "Advice to Owners of New Buildings." This has been prepared to obviate inadvertent misuse of new buildings and the prevention of resultant damage otherwise likely to occur during the maintenance period. In the few weeks it has been available it has sold in the most encouraging fashion and has aroused considerable interest in building circles.

There was much discussion with regard to the percentages specified in the scale of day work. Evidence was produced in support of a possible resolution by the committee on Sections 2 and 3.

Some concern was expressed by the builders at the growing practice by architects of including so much work as P.C. items to be included in tenders and carried out by sub-contracting firms. Although the suggestion received sympathetic consideration, it was felt that in many cases it was inevitable that specialists for a particular class of work who were known to the architect would have to be employed. A list was drawn up and agreed as to what extent this should be done in fairness to the contractor. It was felt that even where P.C. sums were provided that the contractor should have an opportunity where possible of submitting a tender for the work.

The question of a standard form of variation order was discussed, and the committee felt the need of uniform practice in this matter; they are in process of producing such a document for general use. Similarly, they have under consideration time and progress schedules for use in varying types of contract.

I am gratified to know in other counties similar joint committees are functioning, and my experience assures me that there is an unlimited field for the activities of such joint committees; the opportunities they offer for service to the community make their work one of real national importance. I cannot conclude without remarking on the extreme cordiality of the meetings, contributing greatly to the strengthening of the team work.

Correspondence

TOWN AND COUNTRY PLANNING (GENERAL INTERIM DEVELOPMENT) ORDER, 1933

107 Jermyn Street,
St. James's, S.W.1.

To the Editor, JOURNAL R.I.B.A.,—

SIR,—The memorandum from the Clerk to the London County Council relating to the settlement of basic principles as a first stage in the consideration of Town-Planning applications, published in the JOURNAL of 10 August, is the first attempt to elucidate the chaotic state of affairs that has arisen in London under the Town and Country Planning (General Interim Development) Order, 1933, and whilst this memorandum is of considerable assistance in publishing for the first time details of the manner in which preliminary applications should be made, it is also misleading because of the implied suggestion (made twice) that preliminary advice can be obtained from the Council's officers by a visit to the County Hall. Actually this is not so, and such verbal applications only result in the advice to submit an application.

The Council's officers have for many years been extremely courteous and helpful to applicants for advice under the London Building Acts, but when it comes to Town Planning, little or no advice is forthcoming, and at the present time, architects practising in London are quite unable to advise their clients. I am fully aware that Town Planning is new to most of London, and that it is bound to take a little time before the changed procedure can be regularised, but surely something can be done to prevent a drastic holding-up of building for the time being. The memorandum refers to "primary use zoning," "density," and "the use tentatively approved for the area concerned," which leads one to suppose that certain matters are already decided upon, but even under these heads, it is impossible to extract information without the expense and delay of an application. Obviously nearly all applications refer to proposals which "substantially depart from conditions existing at the material date as regards use, height of buildings, and space about buildings," as otherwise there can be no purpose in rebuilding, unless it be the exact replacement of worn-out buildings, and it is essential, if building in London is not to be hampered seriously, for advice on these matters to be forthcoming quickly.

The Ministry of Health have published some excellent model regulations for Town Planning Authorities, which are reasonably clear and concise; could not something similar be issued for London?

Another matter that needs clearing up is the position of the London Building Act, 1930. It would appear that this Act has been repealed except so far as it relates to details of construction and party walls. The parts relating to streets, lines of building frontage, air spaces, and heights of buildings appear to have been replaced by the benevolent dictatorship of the Committee, and whereas this may be a good thing from the Town Planning point of view, unless the Committee publish their guiding principles quickly, it is going to be disastrous for the building industry.

I do not want to give the impression that I am opposed to Town Planning for London, because I am not; but there is all the difference in the world between the wise guidance of building development and the hampering and delaying of all building. Also, I do not wish to appear to be criticising the Council's officers, whom I have always found most helpful when they can be; but, in the case of Town Planning, they do not appear to have the authority necessary to give advice, and until they are able to do so in a manner similar to that which has always been employed in dealing with applications under the London Building Act, 1930, architects will remain with their hands tied, and be unable to advise their clients upon essential matters. Building owners are, in the majority of cases, business people, and they employ the services of qualified architects so as to obtain skilled and impartial advice, and if we are to be deprived of the ability to give that advice, our prestige with our clients will fall. Already building owners with proposals in mind are turning their glances to land on the far side of the L.C.C. boundary, and it is difficult to blame them, because, in my experience, in many town-planned areas outside London, it is possible to obtain essential information on matters controlling design quickly and easily. This would appear to be a matter that the R.I.B.A. should take up.—I am, dear Sir, yours faithfully, PERCY V. BURNETT [*F.*]

5/18 St. Stephen's House,
Victoria Embankment,
Westminster, S.W.1.

To the Editor, JOURNAL R.I.B.A.,—

SIR,—Forewarned being forearmed, members of the Institute may like to know that, at present, it takes two months to get plans approved by the Town Planning Department of the L.C.C., for a building which does not interfere in any way with the proposed development of streets, etc.

The Act came into operation on 28 May last, and the proposed plan for the general development of London can be seen at the County Hall and at the old County Hall, Spring Gardens.

Every courtesy was shown to me at the latter address and I soon found that my plans would not be ruled out or altered owing to restrictions under the Act. I at once sent in plans in duplicate to that department and to the district surveyor. Hearing nothing definite, after a month, I rang up the department at the County Hall and was informed that the plans had been "recommended for approval, subject to the approval of the Local Authorities." I told them that, having obtained the tenta-

tive consent of the District Surveyor, the building had been started at our risk. A month later I got the formal "consent."

It was clear to me that the department was "snowed under" with plans for new buildings and alterations and that it was obvious that no building in London can now be started with anything like the expedition to which we have, heretofore, been accustomed. This may make thousands of pounds difference to owners, by loss of rents, as speed in erection is such an economic factor in any large development scheme.

However, no doubt, when the department gets well into its stride, this present delay may be much reduced.—Yours faithfully,

PHILIP A. ROBSON [*F.*]

NOISE AND HOUSING

25 Grosvenor Place,
London, S.W.1.
16 August 1935.

To the Editor, JOURNAL R.I.B.A.,—

DEAR SIR,—It seems a pity that Mr. Hope Bagenal in studying to attain and accepting the position of "specialist" should exhibit a laxity of thought in a matter outside the sphere of his special activities. I refer to the paper on Noise and Housing in the JOURNAL of 10 August in which Mr. Bagenal makes remarks on general design and the social aspect of architecture.

The "specialist" to-day is the outcome of a social need and fulfils that need only when he is in the closest touch with and fully understands every problem to-day's complex society presents him. His must be a scientific approach. I can only regret that running through Mr. Bagenal's paper I find there is a degree of unreason which makes me feel uncertain in accepting his conclusions. For the word "must" in Mr. Bagenal's sentence: "The Public must rely largely in modern life on the special knowledge of the great professions" I would introduce the word "should." Since the architectural profession have generally retreated before the advance of "industrialism"—and some of Mr. Bagenal's remarks sound suspiciously like a continuation of that rearguard action—the public have relied upon the empirical forces of industrialised society, the "huge thrust" described by Mr. Bagenal. The public has had small opportunity to rely upon a properly organised body of planners and designers equipped with scientifically obtained knowledge. The great and rapid development in housing has found the building industry and the profession unready.

The situation is not helped by animadversions against æsthetic qualities of form when that form emanates from the use of materials designed to meet as nearly as possible the complex problems which are set architecture to-day. Further, it is not helped by censure of scientific attempts to make structure lighter and cheaper. Mr. Bagenal must know that research into physical well-being is continuing side by side with these attempts, though it meets with like difficulties of prejudice and the empirical attitude of mind.

Mr. Bagenal uses the term "machine" too literally to escape criticism as a person discussing general design. It does not seem to matter whether a house is called a "machine to live in" and whether materials for its design and building were taken from any other sphere, such as factory building, provided it is competently designed to deal with requirements of planning, safety, economy, protection and durability, subduing of noise and "shelter for the contemplative life." No good designer to-day, of my knowledge, wants to make his work look like anything but what it is and certainly the only noise he wants it to make is that of an efficient and beautiful place to live in.—Yours faithfully,

BASIL WARD [*A.*]

GLASGOW CONFERENCE AND MODERN ARCHITECTURE

213 West Campbell Street,
Glasgow, C.2.
12 August 1935.

To the Editor, JOURNAL R.I.B.A.,—

SIR,—The controversy on Tradition *v.* Modernism at the Glasgow Conference is of the greatest moment to the profession. Its entertainment value cannot be underrated.

Post-war years provided us with problems of the first magnitude. Our profession has risen magnificently to the occasion, and it is only now, after we have satisfactorily re-planned our cities, re-housed our people, and abolished our slums, that we afford ourselves the luxury of reverting to the old schoolboy debates.

This is great fun. . . . After I've earned my living, I think I'll design a traditional building and become famous.—Yours faithfully,

T. WARNETT KENNEDY

13 Beaumont Gate,
Glasgow, W.2.
14 August 1935.

To the Editor, JOURNAL R.I.B.A.,—

SIR,—May the "Impertinent Student" once more raise his voice in this divided land?

Mr. Henry Elwig, and those for whom he stands, again makes the sweeping statement which I and so many others bitterly resent and contest, "that there is no good in modern architecture."

I admitted at the Glasgow Conference that there is much to condemn in the modern movement, but that "there is no good whatsoever". . . surely any man should pause before uttering such a wholesale and severe condemnation?

Strange though it may seem to Mr. Elwig and Co., we "the jazzing youth" have minds as well as opinions of our own: yet, although magnanimously willing to tolerate our thoughts up to a point (when they will as magnanimously forgive us our erring ways), they seek to mould our minds completely to their standards! We naturally cannot change their opinions, and though we may disagree with those views we do not turn and condemn everything which our forefathers built as absolute "bunk"—if we did, then indeed they would have cause to rouse themselves from their torpor and club chairs to chastise us.

We appreciate the Parthenon in its own and proper place, the most modern (sic) product of its age and country; but smoke begrimed and surrounded by gloomy houses in an industrial city it would appear utterly ridiculous—as may be seen in any parallel cases in Glasgow.

"Time waits for no man." We cannot live on sentiment and tradition, we must adapt ourselves and our needs to modern social and economical conditions. Where would the graceful beauty of our Gothic cathedrals be if the mediævalists had not looked forward; would we now enjoy the grandeur of St. Paul's or the delightful Regency squares if man had always lived on tradition?

If all the Messrs. Elwigs of the past had had their way as Mr. Elwig of Tunbridge Wells now wishes to enforce his, we should, in all probability, still be living in baked-mud huts.—Yours faithfully,

JOHN G. HIRD

Book Reviews

PLANNING IN TOWN AND COUNTRY*

Planning, both of town and country, like all other big social endeavours, must inevitably depend for its ultimate success on the interest, goodwill and co-operation of the general public and its elected representatives. Unless the defects arising from the lack of planning in the past are generally understood, and until the advantages to be gained by intelligent planning to meet present and future conditions are appreciated, there is very little hope of the great movement forward, which we have seen initiated in the past few years, being consummated.

It is for these and other reasons that Mr. Lloyd's book is to be welcomed. It makes a worthy companion to the six previous volumes in the New World Series, and although its main objective is to focus the attention of laymen and administrators on the subject of planning, it is quite certain that technicians also will derive great benefit from perusing its pages.

The author has struck a happy balance between propaganda and fact, and in doing so has given a correct interpretation of the position of planning to-day. The comparative newness of the subject and the still prevailing *laissez-faire* attitude adopted towards it justified the propaganda, and the legislation enacted in recent years, together with the growing number of schemes carried out or in progress, made the factual evidence possible and desirable.

Town and country planning, as a subject, is vast and complex in its ramifications, and Mr. Lloyd has wisely broken it up into a few of its main component parts, which nevertheless have a common thesis running through them to show their close interconnection. The first chapter is of an introductory character and indicates how the new conditions of transport, scientific attainments, labour-saving machinery and so forth call for a complete readjustment in our ideas of planning. The need for a national plan is urged both in this chapter and in a number of those following.

The second chapter describes the towns of Britain, their origin, evolution, and their defects in the light of present-day demands. Allusion is made to the outstanding examples of past planning, including Wren's plan for London, Bath, Regent Street and Edinburgh, and a timely warning is made with regard to the preservation and proper development of the British coast, for some unaccountable reason the Cinderella of planning. Chapter three deals with the planning of the countryside, the author reminding us that rural planning is not new, that it is simply substituting Governmental control for the private control which operated in the past. Of some significance is his suggestion that small-holdings and land settlement generally should receive more consideration from the amenity and social points of view than has been the case hitherto.

In the fourth chapter, the Problem of London, criticisms are made of the way in which London has been allowed to grow unendingly, of the lack of communal centres at Becontree and other large housing estates—it is no credit to housing authorities that the same criticism has general application throughout the country—and of the prevailing tendency to consider housing only as the building of dwellings, and not as merely one of many interrelated problems. The selection of London for comparatively detailed analysis gives rise to the one possible criticism of the book. Although the author has crammed as much information into the twenty-eight pages as seems possible, yet only a skirmish of the problem has resulted. London is so vast and complicated, and its problems in so many respects unique, that it would probably have served a more useful purpose if a normal provincial city had been selected for analysis.

Chapters five and six deal with transport and industrial planning. The complete reorganisation of the road system, with separation of traffic streams of varying speed categories, special cycling tracks, and the elimination of heavy goods transport from roads taking other vehicular and pedestrian traffic, are advocated. In the seventh chapter, which deals with the garden city, the author warmly rebuts the often-expressed belief on the part of certain schools of publicists that to the garden city idea can be attributed all the defects to be seen in post-war open development housing. As he points out, open development is but one of a series of principles in garden city planning.

The last three chapters relate to the legislation and practice of planning and the preparation of schemes. They conclude with a tribute—which, incidentally, is long overdue—to the way in which the Ministry of Health, in the face of much criticism and still more impatience, has prosecuted the duties imposed on it by the multitudinous legislative enactments of recent years.

The book is attractively written, and includes an all too brief bibliography and half a dozen pen drawings. It is not assessing its value too highly to suggest that it should be acquired by all those who, directly or indirectly, are connected with the planning of town and country.

WESLEY DOUGILL [*A.*]

* *Planning in Town and Country*. By T. Alwyn Lloyd. Routledge. 1935. 5s. net. 208 pages.

THE HAYNES GRANGE ROOM*

The Haynes Grange Room is a very interesting specimen of Jacobean woodwork which was acquired for the Victoria and Albert Museum in 1928, largely through private subscriptions, and it has been erected in the museum as nearly as possible in its original form. In this little book Mr. Clifford Smith sets forth its history in simple and clear fashion and illustrates his subject with some excellent photographs and measured drawings.

The room derives its name from having been for many years in a farmhouse of the same name situated near the ruins of the Jacobean house of Houghton Conquest, some seven miles from Bedford, which is credibly identified as the House Beautiful of Bunyan's *Pilgrim's Progress*. The supposition is that this fine woodwork originally adorned one of the rooms of the Jacobean house, but in the present state of the ruins it is not easy to find a room into which it would have fitted, bearing in mind its dimensions and the position of its windows.

Houghton House was built about 1615 for Mary, Countess of Pembroke, the "Sidney's sister, Pembroke's mother" of Ben Jonson's verse, and it has been said that it was designed by John Thorpe and subsequently embellished, as to its loggias, by Inigo Jones. But one cannot help thinking that the supposition is rather too large, for there is no documentary evidence available, and among Thorpe's drawings there is none that agrees with the plan of the house, nor does the detail of the loggias link them with certainty to Inigo Jones's name. However, in such matters of conjecture it is unwise to offer any dogmatic opinion.

The same hesitancy must attend the attribution to Inigo Jones of the design of the fine woodwork. Evidence is produced of the similarity in its design to the interior treatment of the Pantheon at Rome, which Jones had carefully studied, and on opposite pages of the book are given a measured drawing of a niche flanked by large pilasters, at one end of the Haynes Grange Room, and a bay of the Pantheon, showing a niche also flanked by pilasters, from a woodcut by Serlio. The similarity is obvious, but the proportions of the copy are sadly inferior to those of the original. The same drawback in regard to proportion affects the whole room, for although the general effect is quite handsome and the detail is admirable, the great height of the pilasters, the number of them and their disposition, cause one to hesitate to attribute them to a designer so masterly as Inigo. More particularly is the hesitation justified in regard to the chimneypiece, of which the attenuation is in striking contrast to the vigorous handling of Jones's own drawings. But perhaps the feature which requires the greatest stretch of complacence to connect Jones with its design is the ceiling. This is merely dotted over with pigeons in flight, a scheme of decoration wholly at variance with anything that he is known to have employed, his ceilings being always adorned with strong architectural members.

With regard to the house itself, the propriety of connecting its design, at any rate in part, with Inigo Jones is fortified by comparing its north front with his drawing for the west front of St. Paul's Cathedral, which happens to be one of his worst efforts. The central feature of the house and that of St. Paul's have, it is true, some distant resemblance in their general disposition, but hardly enough, one would think, to induce the conviction that they are by the same hand.

The doubts here expressed as to the designer of the house and of the woodwork do but emphasise the uncertainty which Mr. Clifford Smith himself expresses, but which he is inclined to overcome; and the whole question is one open to individual opinion. In any case, they do not lessen the value of this interesting little monograph.

One uncommon point about the woodwork is that it is all of pine which has never been painted, but has acquired, through age, a most beautiful colour and texture. Its excellent detail has survived without damage, in a wonderful way, the numerous removals which the room underwent before it found a permanent and most welcome resting-place in the Victoria and Albert Museum, and gave Mr. Clifford Smith the opportunity of adding a valuable contribution to the architectural history of the early seventeenth century.

J. A. GOTCH [*F.*]

* *The Haynes Grange Room.* By H. Clifford Smith, F.S.A. Printed under the authority of the Board of Education. Price 2s., by post 2s. 3d.

HOUSING AND SLUM CLEARANCE IN MONTREAL

REPORT BY A JOINT COMMITTEE OF THE MONTREAL BOARD OF TRADE AND THE CITY IMPROVEMENT LEAGUE—MARCH 1935.

The alliance of the Board of Trade and the City Improvement League of Montreal in setting up a Joint Committee to study housing and slum clearance under the joint chairmanship of Mr. Guy Tombs, an authority on Transportation, and Professor Percy E. Nobbs, F.R.I.B.A., has led to the preparation of a most interesting and valuable report.

As a picture of existing housing conditions in the commercial metropolis of Canada and as a summary of the best approaches to make towards the amelioration of their evils, the report is both disappointing and encouraging. It is disappointing in revealing that practically no progress has been made in solving the housing and town planning problems of Montreal during the past 20 years and encouraging in showing that an influential body of citizens still believe in the only measures that can provide effective solutions.

While, in parts, the report discusses housing and slum clearance with a seeming lack of appreciation of their subordination to comprehensive town planning, its concluding chapters give proper emphasis to the need of Federal, Provincial and Municipal control of development of land by planning and zoning as a basis for improving housing conditions.

To the English reader, not acquainted with conditions in

Canada, some of the facts presented must cause surprise. We are told that 85 per cent. of the population of Montreal earn less than £250 a year and that a substantial majority earn less than £150; that housing, due to necessities of climatic conditions, must be much more expensive than in England, involving economic rents for workers' dwellings of from £48 to £72 a year; and that factory workers and unskilled labourers earning £2 to £3 a week have to pay one-fifth of their earnings in rent for poor and largely slum accommodation.

The most common residential building in Montreal is the three-storey flat, each building occupying a narrow lot 25 feet in width. Familiarly known in Boston, U.S.A., as the three decker, it is one of the most unprepossessing and generally unsatisfactory types of house.

The report recommends, *inter alia*:—

(1) The establishment of minimum standards of housing accommodation.

(2) Large scale operations and modifications of building bye-laws.

(3) Acquisition of cheap land and replanning and consolidation of sites with enlargement of play space.

(4) Providing cheap houses with State aid in accordance with British methods, but adapted to Canadian conditions and with more generous subsidies.

(5) More aggressive action in housing and town planning under Federal, Provincial and Municipal leadership; setting up a Federal Housing Board; adequate action in the fields of Town Planning, Zoning and Health Regulations.

The report, perhaps, does not sufficiently stress the extent to which the origins of housing evils lie in the methods followed by land speculators and encouraged by the system of taxation. These methods have resulted in premature subdivision of great areas of land into plots; much financial loss to purchasers of sites for dwellings as well as to the municipality; excessive prices of land for use; and wide scattering of small houses without proper sanitation or means of access. There are nine plots in Montreal occupied by building for every 10 unoccupied and in the region controlled by the Metropolitan Commission outside Montreal, there are more unoccupied plots than there are plots within the city. The problem thus created both in regard to wastage of resources and its effect on taxation is a root cause of the worst housing evils in Montreal. The report only touches the fringe of this phase of the problem, which has been growing in seriousness in Canadian cities and becoming more and more a menace to their financial stability as well as to the health of their populations during the past 30 years.

THOMAS ADAMS [*F.*]

THE FINANCING OF TENEMENTS UNDER THE NEW HOUSING BILL

HOUSING FINANCE, A REPORT ON SUBSIDIES FOR RE-HOUSING IN URBAN AREAS. *By the Council for Research on Housing Construction. London: P. S. King. 1935. 2s. 6d.*

The Council for Research on Housing Construction is a body formed principally of representatives of the steel industry and of those sections of the building industry in which Imperial Chemical Industries has a share. Just about a year ago the Council published its first report, on Slum Clearance and Re-housing,* a document which immediately attracted attention not merely because the subject was one of topical interest, but because the report was the first and still remains the most valuable close examination of tenement construction yet made in England. The second report published early this year was on Housing Standards and Statistics.† It contained an analysis of, in particular, overcrowding figures compiled by a special committee of the Council under the chairmanship of Dr. W. H. Coates, of I.C.I., who has also presided over the committee primarily responsible for the third report, which has just been published.

To architects at all events neither of the reports since the first can have quite the same direct appeal that that one had. Architects are not statisticians and seldom sociologists, and cannot easily be persuaded to digest the reports and studies of basic subjects such as building finance which ultimately affect their work a thousand times more drastically than unrelated æsthetic theories which they will study by the volume.

Since the publication of the first report the new Housing Bill has been introduced and is likely to be on the Statute Book soon. The importance of the financial provisions of the Bill in respect of subsidies for the abatement of overcrowding has led the Council to review the scope of the new measures in the light of the figures previously calculated for flats of three or more storeys on expensive sites. There has been considerable alarm expressed in several quarters at the possible results of a subsidy for flats which some people think is a retrograde move—subsidising centralisation at a time when decentralisation should be the chief objective of "positive planning." No polemical discussion of that type comes into the present Report which is genuinely objective and all the more valuable because it is so.

The first part of the Report, after a **résumé** of the subsidy position since 1919, shows the results of subsidy in a table designed to present the figures simply for the general reader: there are subsidiary tables containing closer analysis for experts. The Council is of the opinion that with construction of the type proposed in its first report surpluses may be expected to materialise on the majority of tenement schemes, so that no Local Authority need be deterred from the task of re-housing on account of excessive burdens upon the rates.

The second half of the Report compares the subsidy position under the 1930 Act which dealt with slum clearance and the present Bill which subsidises de-crowding and re-development. The old Act was on the whole more favourable in the case of housing on land up to £15,000 per acre in cost, the new law is more favourable for housing on land of a value above that.

The objective nature of the Report, the clarity of its drafting and the authority possessed by its authors all help to make it a valuable document to all those who are concerned either with local administration or the planning and design of tenement schemes.

* Reviewed JOURNAL, 21 July 1934.

NOISE

NOISE. *By N. W. McLachlan. Oxford University Press. London: Humphrey Milford. 1935. 6s.*

"What makes more noise than a pig under a gate?" If one pig makes a noise it is true enough that two pigs, under similar conditions, will make twice the quantity of noise; but what is less easily reasoned is that the increase in *loudness* will be barely perceptible and that the number of pig voices required to double the loudness might run into thousands. This means nothing, unless we know what noise is and how it is measured.

The publication of Dr. McLachlan's book is nicely timed, for the Problem of Noise has become a Cause. Societies and committees have come into being and now we have a short survey of the subject, dealing with the causes of noise, its effects,

† Reviewed JOURNAL, 23 February 1935.

measurement and present remedies. Here the expert will find a convenient summary and the layman an account which he may read with interest and understand with ease.

Noise is defined as "any undesired sound" or as "sound at the wrong time and in the wrong place." It depends for its existence upon the presence and reactions of a listener, and it can be classified into various types. Annoying noise, which is generally continuous and not too loud and to which the ear adjusts itself after a time. Distracting noise, which is sharp and intermittent, inducing a state of continuous apprehension. Physically harmful noise, of high intensity, which causes permanent deafness, and finally a paradoxically beneficial noise by means of which milk can be sterilised; for bacteria in solution, and incidentally frogs, tadpoles and fishes, are killed by exposure to intense, high-pitched sound. It is found, as a rule, that high-pitched noises cause more complaint than equally loud low-pitched ones.

Loudness, as the author says, is "a very thorny topic." The decibel is becoming a popular little unit and frequently misunderstood. In tabulating noises it is usual to give their "reftone levels," *i.e.*, to relate them to a standard tone, and for this purpose a frequency of 1,000 is found convenient. Thus if a tone with a frequency of 512 has a loudness level of 25 db. above its own datum then the level of the standard tone, when it is judged to be of equal loudness, is only 20 db. and the original tone therefore has a reftone level of 20 db.

A chapter on Noise in Buildings gives a table of various indoor noise levels, ranging from 100 db. in a boiler-maker's shop, down to 26 db. in a country residence. There is also a list of *permissible* noise levels. For instance, for good hearing conditions in lecture rooms the level of background noise must not exceed 20 db. Proper planning is the first defence against both external and internal noise and the second is intelligent use of materials and construction. Floors, especially in flats, must be sound proof and "the law should stipulate a minimum sound insulation by party walls equivalent to a thickness of 9 inches of brick."

The later chapters deal with traffic and engine noises and the very interesting methods of damping vibration due to machinery. Equally interesting, but less conclusive, are some of the tests made to determine the effects of noise upon human subjects. References are numbered throughout the text and fill no less than seven pages at the end. In spite of this, or perhaps for this reason, the book earns our liberal but silent applause.

J. W. PARR [*A.*]

RUSSELL ON ARBITRATION

RUSSELL ON THE POWER AND DUTY OF AN ARBITRATOR. *By Edmund Cave and Ernest Wetton. 13th edition. London: Stevens and Sons, Ltd., and Sweet and Maxwell, Ltd. 1935. £2 2s.*

The thirteenth edition of *Russell on Arbitration* was rendered necessary if for no other reason than that a new Act, the Arbitration Act, 1934, came into force on 1 January 1935. The publishers have been quick to respond to the necessity.

Amongst arbitrators *Russell on Arbitration* is the standard book of reference; and its claim to continue as such, has been maintained in the new edition, which is edited by Edmund Cave, Arbitrator, and Ernest Wetton, Barrister-at-Law.

The book follows its well-known form—a form which is known to all arbitrators, both lawyers and lay arbitrators, who may always find in turning to its pages information and assistance which can be relied on, and this of the most useful, practical and up to date available.

Its case law is always accepted by lawyers and arbitrators as absolutely reliable.

Not the least valuable part of the work is the appendix of forms. Looking through this we feel that it could be extended by the addition of new forms more applicable to the new Act. The index is everything to be desired.

We can assure our readers that no better book is available on the title subject.

W. T. CRESWELL

CHURCH BUILDING IN ENGLAND

INCORPORATED CHURCH BUILDING SOCIETY. ANNUAL REPORT, 1934

The Annual Report of the Incorporated Church Building Society is always interesting as a record of successful work which has continued unbroken for over a hundred years. The society distributed about £5,500 in grants in 1934 to assist Parishes in England and Wales either to build, enlarge, or repair churches, and it can safely be said that every pound was carefully and well spent. The strong committee of consulting architects, which includes most of the foremost ecclesiastical architects in the country, is sufficient evidence that the society takes its architectural responsibilities seriously. In promoting new building the society, judging from the examples illustrated, has an intelligently liberal idea of its functions in the control of design, and there is no evidence of prejudice or undue conservatism.

MOTOR SPECIFICATIONS

SCHEDULE OF PRIVATE CAR SPECIFICATIONS AND PRICES. SCHEDULE OF COMMERCIAL VEHICLE SPECIFICATIONS AND PRICES, INCLUDING AGRICULTURAL TRACTORS. *London: The Society of Motor Manufacturers and Traders, Ltd. 1935. 2s. 6d. each issue.*

The Society of Motor Manufacturers and Traders produces periodically schedules of motor car specifications and prices, which, though intended primarily for car dealers and the transport industry, are of considerable value to architects and town planners. Every type of every make of vehicle marketed in this country is recorded with, in addition to purely mechanical and equipment data for the trade, figures useful to architects, such as turning circles, with base and overall dimensions, ground clearance. Two schedules are published relating to private and commercial vehicles. These can be obtained from the society's statistical department, 83 Pall Mall, London, S.W.1.

ELECTRICAL STATISTICS

"THE ELECTRICIAN" ANNUAL TABLES OF ELECTRICITY UNDERTAKINGS, 1935. *London: Benn. 1935. 10s.*

This is the forty-eighth annual publication of this useful work, which gives a compressed and convenient statement of statistics relating to electrical supply throughout the country. The main section of the volume is an alphabetical list of towns with supply undertakings, giving the names of the undertakings, the system, a.c. or d.c., etc., voltage and charges. The second section gives power companies arranged alphabetically, with full details of supply and services. Third and fourth sections gives Dominion, Colonial and foreign supply undertakings. The tables are prefaced by an article on the "grid," illustrated by a map. The volume is a useful reference book for architects.

Accessions to the Library

1934–1935—IX

INCORPORATING NOTES ON RECENT PURCHASES

(These Notes are published without prejudice to a further and more detailed criticism.)

Lists of all books, pamphlets, drawings and photographs presented to, or purchased by, the Library are published periodically. It is suggested that members who wish to be in close touch with the development of the Library should make a point of retaining these lists for reference.

Books presented by Publisher or Author marked R.
Books purchased marked P.
* *Books of which one copy at least is in the Loan Library.*

ARCHITECTURE

THEORY

FISCHER (THEODOR)
Zwei vorträge über proportionen.
7¼″. 102 pp. Munich and Berlin: Oldenbourg. 1934. (3.80 M.) R.

PRESERVATION (SOCIETIES)

SOCIETY FOR THE PROTECTION OF ANCIENT BUILDINGS
Annual report: 58th, *etc.* 1935.
Including rural housing, safety of ancient churches, surfaces of walls of old churches, church architecture of the renaissance, bells and bell-cages, bridges, windmills.

HISTORY

WADDINGTON (H.)
*A Note on four Turkish renaissance [18th–19th cent.] buildings in Ramleh. (*From* Palestine Oriental Society, Jnl., xv.)
pam. 9¼″. Jerusalem. 1935. *Presented* (2).

PRACTICE

BRIGHTON, *county borough*
Byelaws . . . with respect to new streets and buildings, the alteration of buildings and the sufficiency of space about buildings, *etc.*
pam. 8½″. Brighton. [1933.] *Presented.*

BUILDING TYPES

(CIVIL)

SCHWARZ (OSCAR)
Public abattoirs and cattle markets. *English trans.* G. T. Harrap and L. M. Douglas, *eds.*
9½″. Lond.: Ice and Cold Storage Pubg. Co. 1901.
Presented by Mr. Norman Evill [*F.*].

SOCIETY OF MOTOR MANUFACTURERS AND TRADERS, LTD.: STATISTICAL DEPARTMENT
Schedule of commercial vehicle specifications and prices, including agricultural tractors.
* Schedule of private car specifications and prices.
each 13″. Lond. 1935. 2s. 6d. R. (2 of the latter).

CENTRAL BUREAU OF HOSPITAL INFORMATION
Memoranda. Nos. 85–93. 1934. Mostly 1d.–2½d. each.
Including: 86. Nurses' homes . . . accommodation, *etc.*
87. Aspects of wards for . . . tuberculosis.
92. Flooring materials used in out-patient and casualty departments.

WILKINSON (F.) *and* FORTY (F. J.)
Swimming bath water purification, *etc.*
2nd ed. 8¼″. xvi+262 pp. Lond.: Contractors' Record. 1934.
12s. 6d. R.

NATIONAL ASSOCIATION OF BATH SUPERINTENDENTS
Annual Conference: 11th. 1935.

INTERNATIONAL EXHIBITION, *Brussels*, 1935
Britain at Brussels.—Guide to the pavilion of the British Government at the International Exhibition, Brussels. (In English, French and Dutch.) pam. 9¾″. [Brussels. 1925.] R.

LUCAS (EDGAR)
*Light buildings. . . . for permanent and temporary use, *etc.*
9¾″ × 7¼″. xi+82 pp. Lond.: Technical Press. 1935. 7s. 6d. P.

(RELIGIOUS)

HENDERSON (A. E.)
Tintern Abbey then and now.
8½″. Lond.: Simpkin Marshall. 1935. 2s. R.

LIVERPOOL: CATHEDRAL
The Quarterly Bulletin. Vol. 4, No. 40 (June). 1935.

(EDUCATIONAL)

AMERICAN SCHOOL AND UNIVERSITY, *year-book*
The American school and university. A yearbook devoted to . . . educational buildings, *etc.*
6th annual ed.: 1933–34. 10″. New York: American School Publishing Corpn. 1933. R.

GROPIUS (WALTER)
*The New architecture and the Bauhaus [High School for Design, Weimar]. Trans. from the German by P. Morton Shand.
8″. 80 pp.+pls. Lond.: Faber & Faber. [1935.] 6s. R. & P. (2).

ASSOCIATION OF TECHNICAL INSTITUTIONS *and others*
*Technical college buildings. Their planning and equipment. A report of a Joint Committee, *etc.*
10¾″. xii+144 pp.+xx pls. [Lond.: Hon. Sec. Joint Committee, Chelsea Polytechnic, S.W.3.] 1935. 3s.
Presented by the Associations (*6 put in Library*).

(DOMESTIC)

YOSHIDA (TETSURO)
Das Japanische wohnhaus.
10½″ × 8½″. viii+193 pp. incl. pls. Berlin: Wasmuth. 1935. £1 10s. P.

COUNCIL FOR RESEARCH ON HOUSING CONSTRUCTION
Housing finance. Report on subsidies for rehousing in urban areas.
11¼″ × 8¾″. 34 pp.+folding diag. Lond.: P. S. King. 1935. 2s. 6d. R.

GREAT BRITAIN: PARLIAMENT—ACTS
Housing Act, 1935. 9½″. Lond.: H.M.S.O. 1935. 2s. R.

MINISTRY OF HEALTH
[Housing Act, 1935.] (Circular 1493.) (Hou. 1.)
Index. Changes in the law, *etc.* (Hou. 2. Enclosure to . . . Circular 1493.)
Housing (Rural Workers) Acts (1926 and 1931). (Hou. 3. Enclosure to . . . . Circular 1493.)
3 pams. 9¾″. Lond.: H.M.S.O. 1935. 1d., 2d., 1d. R.
Housing, England.—Provisional regulations . . . 1935, *etc.* (Provisional rules and orders.) ('Housing Acts (Form of Orders and Notices) Regulations, 1935.')
pam. 9¾″. Lond.: H.M.S.O. 1935. 1s. 3d. R.

MINISTRY OF HEALTH
Construction of flats for the working classes. Interim report of departmental committee. pam. 9″. Lond.: H.M.S.O. 1935. 9s. R.

DESCHAMPS (PAUL)
Les Chateaux des Croisés en Terre Sainte.—Le Crac des Chevaliers . . . . introduction . . . . sur la Syrie franque. Plans . . . . par François Anus. (Bibliothèque archéologique et historique, xix.)
2 vols.: text 11″ × 9″. plates 10¾″ × 8½″. Paris: Geuthner. 1934. £5 7s. 6d. the two. P.

DETAILS

BECKETT (H. E.)
The obstruction of light by balconies. (*From* Archt. and Bg. News, 2 Aug.) leaflet 13″. 1935. *Presented by the Building Research Board.*

VICTORIA AND ALBERT MUSEUM: DEPARTMENT OF WOODWORK
The Haynes Grange room. By H. Clifford Smith.
9¾″ × 7½″. Lond.: H.M.S.O. 1935. 2s. R.

ALLIED ARTS AND ARCHÆOLOGY

GÓMEZ-MORENO (MANUEL)
El Arte románico español. (Junta para ampliación de estudios, *etc.*)
11″. 175 pp.+ccxvi pls. Madrid. 1934.
Presented by Señor Mugaruza of Madrid.

EARLY VICTORIAN ENGLAND
Early Victorian England, 1830–1865. [By various authors. Chapter on architecture in vol. ii, by A. E. Richardson.] (G. M. Young, ed., *cover.*) 2 vols. 9″. Lond.: O.U.P. 1934. £2 2s. the 2.
Presented by the Oxford University Press.

Societies

SOCIETY FOR THE PROMOTION OF HELLENIC STUDIES
Report for . . . 1934–35. 1935.

BRITISH SCHOOL OF ARCHÆOLOGY IN EGYPT
Report. xlth year. 1933–34. 1934.

SOCIETY OF ANTIQUARIES OF SCOTLAND
Proceedings. 1933–34. 1934.

BUILDING SCIENCE

Practice and Industry

NEWMAN (W. H.)
The Building industry and business cycles.
9″. ix+73 pp. Chicago: U.P. 1935. 4s. 6d. P.

BUILDING INDUSTRIES NATIONAL COUNCIL
Report of proceedings at a conference . . . 1935.
pam. 11″ × 8½″. Lond. [1935]. R.
Conference . . . 1935. The President's address.
pam. dupl. typescript. 14″. Lond. 1935.
The Special Committee for Public Relations. Its work, *etc.*
(*From* B— I— Survey, Apl.) Leaflet. 11″. Lond. 1935.

Materials

MÖLLER (KÁROLY)
Az Épitöanyagok gyakorlati kézikönyve. [Practical handbook on building materials.]
2 vols. 9″. Pécsett: Dunántúl Egyetemi; Budapest: Pfeifer Ferdinand *etc.* 1929–30.
Presented by the Author (Dr. Ing. Möller, of Budapest).

DEPARTMENT OF SCIENTIFIC AND INDUSTRIAL RESEARCH: FOREST PRODUCTS RESEARCH
Forest products research records:—
No. 1. The testing of timbers at the . . . Laboratory. 1935.
No. 2. (Timber mechanics series No. 1.) Strength tests of structural timbers. Part 1, *etc.* 1935.
each, pam. 9¾″. Lond.: H.M.S.O. 6d. R.

COPPER DEVELOPMENT ASSOCIATION
Copper data. (Publication No. 12.) (Engineers' note book series, *cover series title.*) 6¾″. (ii)+68 pp. incl. folding pls. Lond. 1935. R.

DEPARTMENT OF SCIENTIFIC AND INDUSTRIAL RESEARCH: BUILDING RESEARCH
Bulletins, *contd.*
*No. 6. The prevention of corrosion of lead in buildings. By F. L. Brady. 2nd ed. 9¾″. Lond.: H.M.S.O. 1935. R.(2).

Construction

KNOOP (DOUGLAS) *and* JONES (G. P.)
The London mason in the seventeenth century.
10¼″. (iv)+92 pp. Manchester: U.P. 1935. 5s.
Presented by the Authors.

BRITISH STEELWORK ASSOCIATION
Modern buildings: the financial aspect.
pam. 8½″. Lond. [1935.] R.

Sanitary Science and Equipment

INSTITUTE OF PLUMBERS
Minimum Specifications (No. 1) for the installation of soil, waste and ventilating pipes and for the " combined system " of soil, waste and ventilating pipes. pam. 8½″. Lond. 1933. 2s. *Presented.*
Minimum Specification (No. 2) for the fixing of cold water services. pam. 8½″. Lond. 1933. 2s. *Presented.*

LONDON COUNTY COUNCIL
Drainage by-laws.—. . . made. . . 6th March 1934, *etc.* (No. 3065).
pam, 13″. Lond.: P. S. King. 1934. 6d. R.

MÖLLER (C. G.)
Daylight illumination and town planning. (*From* Proc. International Illumination Congress, 1931.)
pam. 9¼″. Camb.: U.P. 1931. *Presented by the Author.*

BOLTON (D. J.), HONEY (P. C.), *and* RICHARDSON (N. S.)
Electrical water heating, *etc.*
8″. viii+192 pp. Lond.: Chapman and Hall. 1935. 7s. 6d. P.

MARKS (P. L.)
Chimneys and flues domestic and industrial.
7¼″. 131 pp.+folding front. Lond.: Technical Press. 1935. 4s. P.

MACINTYRE (J.)
Air conditioning, including some notes on the British Museum installation. (British Association of Refrigeration.)
proofs. 9¾″. Lond. [1934.] (1s. 3d.) P.

MÖLLER (KÁROLY)
Hangvédelem épületekben. [Building acoustics.]
pam. 11½″. Budapest: József-Müegyetem. 1932.
Presented by the Author.

MCLACHLAN (N. W.)
Noise. A comprehensive survey, *etc.*
7¼″. vii+148 pp. Lond.: O.U.P. 1935. 6s. R.

MÖLLER (KÁROLY)
A Lárma elleni védekezés müszaki feladatai. [Noise, *etc.*]
pam. 10¼″. Budapest: Székesföváros. 1934.
Presented by the Author.

R.I.B.A.
*[Noise.] Interim recommendations on planning against noise. (*From* Journal, 8 June. Reprint of article headed Planning against noise, p. 853.) (Anti-Noise League.) 1935.
4 copies in Loan Library.

Societies

BRITISH STANDARDS INSTITUTION
Handbook of information including annual report, 1934–35, and indexed list of British Standard Specifications.
8o. Lond. July, 1935. 1s. R. (2).

INCORPORATED CLERKS OF WORKS ASSOCIATION, *etc.*
Year book. 1935–36. [1935.]

INSTITUTION OF STRUCTURAL ENGINEERS
Year book . . . 1934–35. 1935.

ENGINEERING

INSTITUTION OF STRUCTURAL ENGINEERS, *formerly* Concrete Institute
Mnemonic notation for engineering formulæ. Report of the Science Committee, *etc.* With explanatory notes by E. Fiander Etchells. [With sticker revision.]
8½″. Lond. 1918 (sticker, 1933). *Presented.*

DEPARTMENT OF SCIENTIFIC AND INDUSTRIAL RESEARCH: BUILDING RESEARCH
Technical papers, *cont.*:—
* No. 18. Correlation between laboratory tests and observed temperatures in large dams. By N. Davey.
pam. 9¾″. Lond.: H.M.S.O. 1935. 9d. R.

INSTITUTION OF MECHANICAL ENGINEERS
Proceedings. Vol. 128. 1934. Nov.–Dec. 1935.
(*Including:* Allcutt (E. A.). Heat insulation as applied to buildings and structures.)

INSTITUTION OF ELECTRICAL ENGINEERS
List of . . . members, etc. 1935.

TOPOGRAPHY

PRIESTLEY (J. B.) *and others*
The Beauty of Britain. *Etc.* (The Pilgrims' Library.) [By various authors.] 7¼″. viii+248 pp. Lond.: Batsford. 1935. 5s. R.

ELMES (JAMES)
A Topographical dictionary of London and its environs; *etc.*
8o. Lond. 1831.
Author's own corrected copy, interleaved.
Presented by Miss Alice Francis and Miss Ellen Francis.

THORNHILL (J. F. P.)
Greater London. A social geography.
7¾″. xv+122 pp. Lond.: Christophers. 1935. 3s. 6d. P.
(*To be continued.*)

Notes

XIII INTERNATIONAL CONGRESS OF ARCHITECTS AT ROME

Mr. H. V. Lanchester [*F.*] and Lt.-Col. H. P. Cart de Lafontaine [*F.*] have been appointed as official representatives of H.M. Government at the Rome Congress in September.

SIR GEORGE CHRYSTAL, K.C.B.

In the last number of the JOURNAL it was incorrectly stated that Sir George Chrystal, who has recently been appointed Permanent Secretary to the Ministry of Health, had been Secretary to the Ministry of Health since 1919. Sir George Chrystal was Secretary to the Ministry of Pensions during those years.

COUNCIL FOR THE PRESERVATION OF RURAL ENGLAND

EIGHTH NATIONAL CONFERENCE

Newcastle-upon-Tyne, 10–13 October 1935

The eighth National Conference for the Preservation of the Countryside will take place at Newcastle-upon-Tyne, under the Presidency of the Earl of Crawford and Balcarres, K.T. The Association for the Preservation of Rural Scotland and members of the Northumberland and Newcastle Society are co-operating in the conference.

The conference sessions will be held in the Connaught Hall, Blackett Street. There will be three sessions: Friday morning, 11 October, at 10.0, Friday afternoon at 2.30, and Saturday morning, 12 October, at 9.30, and papers will be read dealing with the following subjects, though not necessarily in this order.

1. Movable dwellings and camping grounds.
2. Local authorities and co-operation with preservation societies, especially with regard to advertisements and planning.
3. Schools and the countryside, with special reference to the protection of flora and fauna.

The Lord Mayor of Newcastle-upon-Tyne has kindly consented to hold a reception of members and delegates at the Assembly Rooms on Thursday evening, 10 October, at 8.30 p.m.

On Friday evening, 11 October, at about 9 p.m., it is hoped to be able to arrange a discussion and an exchange of views between the A.P.R.S. and the C.P.R.E. at the Central Station Hotel.

On Saturday afternoon, 12 October, it is proposed to arrange a visit to the Roman Wall at Borcovicus, and the party will be entertained to tea at Wallington House, Cambo, by Sir Charles Trevelyan, Bart., H.M. Lieutenant for Northumberland, and Lady Trevelyan. On Sunday it is hoped to arrange a visit to Bamburgh, driving via Warkworth and Alnwick.

No special railway vouchers will be issued for the conference, as members and delegates will be able to avail themselves of the ordinary cheap facilities provided by the railway companies.

The Conference Headquarters will be at the Central Station Hotel. Members will make their own arrangements for hotel accommodation.

The Conference is not confined to delegates and members of the C.P.R.E., and friends are invited. All societies, organisations and local authorities desiring to send delegates, and all individuals who desire to attend are requested to apply to the Secretary, C.P.R.E., Mr. H. G. Griffin, 17 Great Marlborough Street, London, W.1., who will supply full information. The conference fee is 5s.

Local authorities are notified that the Minister of Health has always sanctioned reasonable expenses incurred by delegates in connection with the annual conference.

REVISION OF ORDNANCE MAPS

PARALLACTER SYSTEM OF PHOTOGRAPHIC SURVEYING

Communicated by the Science Standing Committee

On 17 June 1933, and 24 March 1934, articles were contributed to the JOURNAL at the instance of the Science Standing Committee by Mr. J. M. Waldram, B.Sc., F.Inst.P., and Mr. P. J. Waldram, F.S.I., on the geometrical principles of photographic projection and the use of photographs in town planning and design, explaining, *inter alia*, the application to surveying by simple photography of the "Parallacter" system, which had been communicated to the Committee by Mr. J. W. Gordon, K.C., the system having been used with great success by Mr. Godfrey Allen, Surveyor to St. Paul's Cathedral, in the remarkable series of photographs showing the effect of high buildings in the neighbourhood of the Cathedral, in his report to the Dean and Chapter.

These articles have, with the consent of the Council, now been published by Messrs. P. S. King and Son, 14 Gt. Smith Street, Westminster, in pamphlet form under the title of "The Use of Photographs in Town Planning and Design."

Mr. Gordon has since forwarded to the Committee copies of his correspondence with the Ministry of Agriculture relating to his application of the system to an Ordnance map Sheet Kent, VIII/7, which includes an educational establishment at Sidcup, which he had surveyed by permission of the L.C.C.

This disclosed errors in this particular Ordnance sheet which were considered by the Minister when they were brought to his attention to be sufficiently serious to warrant instructions being given for the area covered by the sheet to be re-surveyed and a new map issued.

R.I.B.A. FINAL AND SPECIAL FINAL EXAMINATIONS INDIA

The R.I.B.A. Examination Board in India have arranged to hold the R.I.B.A. Final and Special Final Examinations in Bombay from 1 to 9 November 1935. The last day for receiving applications, which should be sent to the Hon. Secretary of the R.I.B.A. Examination Board in India, 43 Apollo Street, Fort, Bombay, is 1 October.

INTERNATIONAL ASSOCIATION FOR IRANIAN ART AND ARCHÆOLOGY

THIRD INTERNATIONAL CONGRESS AND EXHIBITION OF PERSIAN ART AND ARCHÆOLOGY

10–18 September 1935

The Third International Exhibition of Persian Art will be opened in the Hermitage Museum, Leningrad, on 10 September 1935. At the same time, in response to the generous invitation of the Soviet Government, the International Association for Iranian Art and Archæology will inaugurate the Third Congress, which will be held in Leningrad and Moscow from 10 to 18 September.

The Exhibition, while comparable in size and magnificence to the London Exhibition of 1931, has a distinctly different aim. The London Exhibition comprised a systematic and comprehensive collection of nearly all the available masterpieces of

purely Persian art; the Leningrad Exhibition aims primarily to show the relation of Persian art to that of the other cultures with which it was directly associated, in particular the art of the regions to the north and east of Iran in which the Russian collections are so extraordinarily rich, containing as they do more than 90 per cent. of all the known material. The relations of Persian art with that of the Caucasus, Turkestan, Siberia, Central Asia, Mongolia and the Far East will be shown with a fullness that has never before been possible, and an essential part of the Exhibition will be the display of material discovered since the London Exhibition.

The Exhibition will also include the first systematic presentation of the results of the Survey of Persian Architecture initiated by the American Institute. Upwards of 600 photographic enlargements will be shown, and in addition there will be plans, elevations and coloured drawings. A special gallery will be devoted to the great plans of city developments executed by M. E. E. Beaudouin.

The full programme of the Congress will be published shortly. The Executive Secretary is Dr. Arthur Upham Pope, 39 Hill Street, London, W.1.

AN R.I.B.A. CAMERA CLUB

The Social Committee of the Royal Institute has had under consideration the formation of a Camera Club or Photographic Society of the R.I.B.A.

In order, however, to ascertain whether such a club would receive sufficient support to warrant its formation, the Committee would be very glad to hear from members interested in the project.

Interested members are requested to write to the Hon. Secretary of the Committee, at 66 Portland Place.

Allied Societies

THE BIRMINGHAM AND FIVE COUNTIES ARCHITECTURAL ASSOCIATION

Award of R.I.B.A. Medal

The award for the Royal Institute of British Architects' medal for a building of highest architectural merit erected during the five years ending 31 December 1934, within the area of the Birmingham and Five Counties Architectural Association (Warwickshire, Worcestershire, Staffordshire, Herefordshire and Shropshire), has been made by the jury, of which the following were the members:

H. J. Rowse, F.R.I.B.A. (appointed by the R.I.B.A.).
Alderman W. A. Cadbury.
C. M. C. Armstrong, F.R.I.B.A.
W. T. Benslyn, F.R.I.B.A., A.R.C.A.
H. T. Buckland, F.R.I.B.A.
G. Drysdale, F.R.I.B.A.
H. H. Holden, A.R.C.A.
W. A. Harvey, F.R.I.B.A.

The Town Hall, Dudley (architects, Messrs. Harvey and Wicks, of 5 Bennett's Hill, Birmingham), is the chosen building.

The buildings occupy a site at the corner of Priory Street and St. James' Road, extending from the public building to the old police buildings, and comprise a town hall and offices, banqueting room, sessions court, coroner's court, small museum and war memorial.

The presentation of the medal will be made at a meeting of the Association next session.

Membership Lists

R.I.B.A. PROBATIONERS

During the month of July 1935 the following were enrolled as Probationers of the Royal Institute:—

Addison: Alexander Joseph, 83 Queen's Road, Dalston, E.8.
Axon: Keith Lee, Gaticlyve, Cambridge Road, Gatley, Cheshire.
Bagguley: Reginald Walker, Blackcliffe Farm, Bradmore, Notts.
Ball: Kenneth James, 56 Storforth Lane, Hasland, Chesterfield, Derbyshire.
Benington: Philip Humphrey, Moorelands, Weaste, Salford, 5.
Brereton: John, 19 Brereton Avenue, Bebington, Wirral, Cheshire.
Cadwallader: John Douglas, "Niton," Old Oscott Lane, Hamstead, Birmingham.
Cale: Nabor Keith, Graig Olway, Usk, Mon.
Cathery: Edmund Laurie, 124 Caistor Park Road, West Ham, London, E.15.
Chivers: Norman Howard, 76 Bedford Street, Liverpool.
Coast: Herbert Edward, 101 Simpsfield Avenue, Thornton Heath, Surrey.
Colpoys-Johnson: Graham Christopher, 1 Carliery Avenue, Southbourne, Bournemouth.
Corlette: John Hubert Christian, 28 Palace Gardens Terrace, W.8.
Cunningham: Ian Douglas, 8 Three Beaches, Paignton, S. Devon.
Darley: Edward Armand, 34 Southcoates Avenue, East Park, Hull.
Darracott: (Miss) Hazel Margaret, 4 Queensway, Wallasey, Cheshire.
Dearden: Gordon Beckwith, 78 Gt. Clowes Street, Manchester, 7.
Dhurandhar: Sunder Motiram, Relief, 10th Road, Khar, Bombay.
Donald: John Hutcheon, 112 High Street, Montrose.
Elliott: Edward Procter, Northfield, Grosvenor Road, Batley, Yorks.
Evans: Cecil William Thomas, Bachelors Walk, Lisburn, N. Ireland.
Falconer: Peter Serrell, St. Francis, Amberley, Stroud, Glos.
Fogarty: Oswald Joseph, 2 Southview, Brookland Road, Old Swan, Liverpool, 13.
Fox: Owen William, 4 Albert Road, Bromley, Kent.
Garner: William, "Moorside," 310 Pickering Road, Hull, Yorks.
Gibb: Michael Cullen, 26 Barclay Road, Croydon, Surrey.
Goodings: John Frederick, 86 Byron Avenue, Manor Park, E. 12.
Hill: Eric Percy, 7 Dunsford Place, Bath, Somerset.
Hill: Kenneth George, 45 Fairacres Road, Oxford.
Hitch: Harold John, 98 Minard Road, Catford, S.E.6.
Horlock: Leonard Eric, 21 Jutland Road, Catford, S.E.6.
Hughes: Eric Charles Colin, 32 St. George's Road, Hampstead, N.W.6.
Hughes: William, Brynawel, Pen-y-lan Hill, Cardiff.
Jackson: Thomas Vivian, Zenda, Hoole Lane, Chester.
Jennings: Eric William, 4 Wells Road, Bath, Somerset.
Jeremiah: Keith Charlesworth, 2 Wrottesley Road, S.E.18.
Johnson: Stephen Maurice, West Garth, Westwood Avenue, Hornsea, E. Yorks.
Jones: Herbert, 107 Alington Street, Aigburth, Liverpool, 17.
Judson: Frederick Roy, 186 Willefield Way, Hampstead Garden Suburb, N.W.11.
Kearsley: Edmund Donald, Christ Church Vicarage, Wakefield.
Kirby: George Alfred, 19 Stockport Road, Streatham, S.W.16.

LANGSTON: ALBERT HENRY, 14 Short Road, Leytonstone, E.11.
LEONARD: HUGH HENRY ALISON, 32 Clavering Avenue, Barnes, S.W.13.
LEOPARD: GORDON CHARLES, Oakdene, Cowbridge Road, Ely, Cardiff.
MARTIN: ARTHUR, 1 Hyde Park Gardens Mews, Paddington, W.2.
MELDRUM: ROBERT GILLESPIE, 814 Endsleigh Court, Upper Woburn Place, W.C.1.
MOORE: NORMAN CHURCHILL, Tree Cottage, Upper Basildon, Berks.
PARKINSON: BRIAN MICHAEL GERARD, 3 The Paragon, Clifton, Bristol.
PARSONS: ANTHONY LESLIE, Holmwood, Greenhill Road, Wylde Green, Birmingham.
PHILP: WILLIAM SPENCER, 22 The Drive, Bengeo, Hertford.
REUBEN: REUBEN SIMON, c/o Messrs. Simon and Co., Architects, Commissariat Building, Hornby Road, Bombay, India.
REUBEN: SOLOMON SIMON, c/o Messrs. Simon and Co., Architects, Commissariat Building, Hornby Road, Bombay, India.
RICHARDSON: JACK ATHOL, 11 Westbourne Crescent, Lancaster Gate, W.2.
RIDER: (Miss) BERTHA MARY, 1 Windsor Terrace, Bristol, 8.
ROWLAND: EDWARD BERNARD, 82 Baines Avenue, Salisbury, S. Rhodesia.
SATSANGI: SAUT PRASAD, c/o D. D. Markau, Esq., Oriental Life Assurance Co., Ltd., Fort Bombay.
SCHOLFIELD: PETER HUGH, New Hutton Vicarage, Kendal.
SHASTRI: JANARDAN DALSUKHRAN, Sagrampura, Ha[illegible]dhia Street, Surat, India.
SLATER: (Miss) KATHARINE PAMELA, 8 Wellgarth Road, Golders Green, N.W.11.
SMITH: JOHN EDMUND, 159 Banday Street, Leicester.
SNOWDEN: AUSTYN GUY, "Hillmon," Tinshall Lane, Cou[illegible]ridge, Leeds.
STILL: RONALD KENNETH ARTHUR, 69 South Street, Chichester, Sussex.
TARDREW: HUGH MARTIN, St. Mary's Vicarage, Beverley, E. Yorks.
THOMPSON: JOHN SEYMOUR, 6 St. Anthony's Road, Blundellsands, Liverpool, 23.
UNDERWOOD: (Miss) BETTY YVONNE, 5 Copgrove Road, Leeds, 8.
UNSWORTH: THOMAS WILKINSON, 82 Church Street, Little Lewes, near Bolton, Lancs.
WHITBY: GEORGE FREDERICK, 42 Creighton Road, Ealing, London, W.5.
WHITE: KENNETH CHARLES, 9 Remillo Avenue, Grimsby.
WILLIAMS: GILBERT BECKETT ARTHUR, 38 Sydenham Park, Sydenham, S.E.26.
WOODS: ROY, 38 Henley Road, Ipswich, Suffolk.
WRAGG: ROBERT BRIAN, 4 Clifford Road, Sheffield, 11.
WRIGHT: EDWARD J., 189 Coleherne Court, S.W.5.
WRIGHT: ERNEST ROY, P.O. Box 482, Salisbury, S. Rhodesia.
WYLIE: SYDNEY, 12 Tanfield Street, Virginia Road, Leeds, 2.
YOUNG: HAROLD, 31 Chestnut Avenue, Hyde Park, Leeds, 6.
YOUNGMAN: HAROLD ALBERT GEORGE, 136 McLeod Road, Abbey Wood, S.E.2.

Notices

ASSOCIATES AND THE FELLOWSHIP

Associates who are eligible and desirous of transferring to the Fellowship are reminded that if they wish to take advantage of the election to take place on 2 December 1935 they should send the necessary nomination forms to the Secretary R.I.B.A. not later than Saturday, 28 September 1935.

LICENTIATES AND THE FELLOWSHIP

The attention of Licentiates is called to the provisions of Section IV, Clause 4 (*b*) and (*cii*), of the Supplemental Charter of 1925. Licentiates who are eligible and desirous of transferring to the Fellowship can obtain full particulars on application to the Secretary R.I.B.A., stating the clause under which they propose to apply for nomination.

LEGAL ADVICE FOR MEMBERS OF THE R.I.B.A.

The Practice Standing Committee, with the approval and authority of the Council, have made arrangements with an experienced solicitor whereby members of the R.I.B.A. can obtain legal advice for a very moderate fee on matters which arise in their practice from time to time.

The following arrangements have been made:—

A member desiring advice as to his legal position should in the first instance communicate his inquiry to the Hon. Secretary of the Practice Standing Committee, together with the relative documents. Should the matter raise a question of general interest to the profession the Committee would obtain the opinion and forward it to the member. In other cases the member would be put in communication with the solicitor, who would advise him direct.

In matters of general interest the solicitor's fee would be borne equally by the R.I.B.A. and the member concerned, and in other cases the fee would be borne wholly by the member. The fee would in either case be limited to a fixed amount. The advice would normally be confined to an opinion on the documents, but in cases where an interview between the member and the solicitor would be desirable, this would be arranged without extra fee.

Particulars as to the fee chargeable may be obtained on application to the Secretary R.I.B.A.

BUILDING SURVEYING EXAMINATIONS

The R.I.B.A. Statutory Examination qualifying for candidature as District Surveyor in London and the R.I.B.A. Examination qualifying for candidature as Building Surveyor under Local Authorities will be held at the R.I.B.A. on 9, 10 and 11 October 1935.

Applications for admission to either examination must be made not later than 18 September 1935, on the prescribed form to be obtained from the Secretary R.I.B.A., 66 Portland Place, London, W.1.

OVERSEAS APPOINTMENTS

When members are contemplating applying for appointments overseas they are recommended to communicate with the Secretary R.I.B.A., who will supply them with any available information respecting conditions of employment, cost of living, climatic conditions, etc.

NEW BUILDING MATERIALS AND PREPARATIONS

The Science Standing Committee wish to draw attention to the fact that information in the records of the Building Research Station, Garston, Watford, is freely available to any member of the architectural profession, and suggest that architects would be well advised, when considering the use of new materials and preparations of which they have had no previous experience, to apply to the Director for any information he can impart regarding their properties and application.

THE NATIONAL ASSOCIATION OF WATER USERS

Members are reminded that the National Association of Water Users, on which the R.I.B.A. is represented, exists for the purpose of protecting the interests of consumers.

Members who experience difficulties with water companies, etc., in connection with fittings are recommended to seek the advice of the Association. The address of the Association is 46 Cannon Street, London, E.C.4.

Competitions

The Council and Competitions Committee wish to remind members and members of Allied Societies that it is their duty to refuse to take part in competitions unless the conditions are in conformity with the R.I.B.A. Regulations for the Conduct of Architectural Competitions and have been approved by the Institute.

While, in the case of small limited private competitions, modifications of the R.I.B.A. Regulations may be approved, it is the duty of members who are asked to take part in a limited competition to notify the Secretary of the R.I.B.A. immediately, submitting particulars of the competition. This requirement now forms part of the Code of Professional Practice in which it is ruled that a formal invitation to two or more architects to prepare designs in competition for the same project is deemed a limited competition.

COLCHESTER: NEW PUBLIC LIBRARY

The Council of the Borough of Colchester invite registered architects who are members of the Essex, Cambridge and Hertfordshire Society of Architects and practise in those counties to submit, in competition, designs for a new Public Library.

Assessor: Professor A. E. Richardson, F.S.A. [*F.*].
Premiums: £150, £125, £75.
Last day for receiving designs: 30 November 1935.

Conditions of the competition may be obtained on application to Mr. R. L. H. Hiscott, Town Clerk, Town Hall, Colchester. Deposit £1.

BOLTON: NEW MUNICIPAL TECHNICAL COLLEGE

The Corporation of the County Borough of Bolton invite architects of British nationality to submit, in competition, designs for a new Municipal Technical College proposed to be erected in Manchester Road, Bolton.

Assessors: Mr. J. Bradshaw Gass [*F.*] and Mr. A. J. Hope [*F.*].
Premiums: £500, £250 and £100.
Last day for receiving designs: 31 October 1935.
Last day for questions: 17 August 1935.

Conditions of the competition may be obtained on application to Mr. John A. Cox, M.A., Director of Education, Education Offices, Bolton. Deposit £2 2s.

BRIGHTON: NEW FIRE STATION

The Council of the County Borough of Brighton invite architects of British nationality and resident in the British Isles to submit, in competition, designs for a new Fire Station.

Assessor: Mr. Stanley G. Livock [*F.*].
Premiums: £200, £125 and £75.
Last day for receiving designs: 5 October 1935.
Last day for questions: 30 July 1935.

Conditions of the competition may be obtained on application to Mr. J. G. Drew, Acting Town Clerk, Town Hall, Brighton. Deposit £1 1s.

BURY: NEW TOWN HALL

The Council of the County Borough of Bury invite architects of British nationality domiciled in the United Kingdom to submit, in competition, designs for a new Town Hall.

Assessor: Mr. J. Hubert Worthington, O.B.E. [*F.*].
Premiums: £500, £300 and £150.
Last day for receiving designs: 31 December 1935.
Last day for questions: 30 September 1935.

Conditions of the competition may be obtained on application to The Town Clerk, Municipal Offices, Bury, Lancs. Deposit £2.

HERTFORD: NEW CENTRAL COUNTY BUILDINGS

The Hertfordshire County Council invite architects to submit, in competition, designs for new Central County Buildings to be erected at Hertford.

Assessor: Mr. Robert Atkinson [*F.*].
Premiums: £350, £250 and £150.
Last day for receiving designs: 1 October 1935.
Last day for questions: 1 July 1935.

Conditions of the competition may be obtained on application to The Clerk of the County Council, Clerk of the Peace Office, Hertford. Deposit £2 2s.

PORTSMOUTH: LAY-OUT OF LUMPS FORT SITE

The Corporation of the City of Portsmouth invite architects to submit, in competition, designs for the lay-out of an area known as Lumps Fort.

Assessor: Mr. E. Prentice Mawson, M.T.P.I. [*F.*].
Premiums: £350 and £200 to be divided between the authors of not more than three designs placed next in order of merit.
Last day for receiving designs: 16 October 1935.
Last day for questions: 31 July 1935.

Conditions of the competition may be obtained on application to Mr. F. J. Sparks, Town Clerk, The Guildhall, Portsmouth. Deposit £1 1s.

SALISBURY, SOUTHERN RHODESIA: NEW PARLIAMENT HOUSE

The Government of the Colony of Southern Rhodesia invite architects of British citizenship to submit, in competition, designs for a new Parliament House to be erected at Salisbury, Southern Rhodesia.

Assessor: Mr. James R. Adamson [*F.*].
Premiums: £500, £300, £200 and £100.
Last day for receiving designs: 31 January 1936.
Last day for questions: 26 August 1935.

Conditions of the competition may be obtained:—

(*a*) in England from the High Commissioner for Southern Rhodesia, Crown House, Aldwych, London, W.C.2.

(*b*) in South Africa from The Director of Public Works, P.O. Box 365, Salisbury, Southern Rhodesia. Deposit £2 2s.

YORK: NEW MUNICIPAL OFFICES, CLINICS, ETC.

The Corporation of York invite architects of British nationality and domiciled in the United Kingdom to submit, in competition, designs for new Municipal Offices, Clinics, etc.

Assessor: Mr. Henry V. Ashley [*F.*].
Premiums: £250, £150, £100 and £50.
Last day for receiving designs: 1 November 1935.
Last day for questions: 29 July 1935.

COMPETITION FOR TIMBER HOUSES

The Timber Development Association, Ltd., invite architects of British nationality to submit, in competition, designs for:

(1) A Timber House to cost £800.
(2) A Timber Week-end Cottage to cost £350.

Assessors: Mr. Robert Atkinson [*F.*].
Mr. E. Maxwell Fry [*A.*].
Mr. G. Grey Wornum [*F.*].

Premiums: £100, £30 and £25 in each section.

Last day for receiving designs: 28 October 1935.

Conditions of the competition may be obtained on application to the Manager, Timber Development Association, Ltd., 69 73 Cannon Street, E.C.4.

Members' Column

PRACTICE WANTED

MEMBER wishes to purchase small well-established provincial practice. Full particulars to Box No. 1285, c/o Secretary R.I.B.A.

PRACTICE FOR SALE

ARCHITECT (F.R.I.B.A.) wishes owing to ill-health to sell his practice of 16 years' standing. Hampshire coast town. Excellent opportunity for a young architect in a growing and busy centre. Box No. 1835, c/o Secretary R.I.B.A.

CLERK OF WORKS WANTED

BRIGHTON architect requires clerk of works for medium-sized public job in Brighton, consisting of levelling and terracing, reinforced concrete work and general building. The job will last about eight months, and is suitable for a young architect requiring experience on job. Salary, five guineas a week.—Box No. 1785, c/o Secretary R.I.B.A.

PARTNERSHIPS WANTED

A PARTNERSHIP (or good assistantship) is wanted by young A.R.I.B.A. (1st Class Hons. degree). Experience in London, Provincial and American offices. Exceptional qualifications in design. Has travelled widely. Experience in Competition work. Box No. 2935, c/o Secretary R.I.B.A.

ASSOCIATE desires position as Chief Assistant with a view to partnership. Capital available. Box No. 3185, c/o Secretary R.I.B.A.

M.A., A.R.I.B.A., age 30, seeks junior partnership or position as senior assistant with view to partnership in or near London, ten years in practice.—Box No. 9835, c/o Secretary R.I.B.A.

NEW PARTNERSHIP

MR. REGINALD H. JUBB [*A.*] has been taken into partnership by Mr. F. T. Waddington [*F.*], and has changed his office from 129 Warbreck Hill Road, Blackpool, to 52 Abingdon Street, Blackpool, where all future communications should be addressed.

DISSOLUTIONS OF PARTNERSHIP

THE partnership existing between Messrs. Wylie, Wright and Wylie, 204 West Regent Street, Glasgow, has been dissolved as from 30 April 1935. Mr. Alexander Wright [*L.*] has retired from the firm and will carry on business on his own account as a Chartered Architect at 189 Pitt Street, Glasgow. The other members of the firm have acquired the whole business and assets of the firm and will continue to practise as chartered architects at the same address as previously under the firm name of Messrs. Wylie, Wylie and Shanks [*A.A.A.*].

HIS partnership agreement in the firm of Welch, Cachemaille-Day and Lander having expired on 2 September 1935, Mr. N. F. Cachemaille-Day [*A.*] has begun independent practice at 26 Dorset Street, W.1.

CHANGES OF BUSINESS ADDRESS

MESSRS. IVOR JONES [*A.*] and PERCY THOMAS, P.R.I.B.A., have removed their office to 10 Cathedral Road, Cardiff. (Tel.: Cardiff 1380.)

MR. L. F. VANSTONE [*L.*] has removed his office to 2 Buckland Terrace, Plymouth, and would like all trade circulars and catalogues sent to the new address.

MR. EDWARD ROUGHLEY [*L.*] has removed his office to Wavertree Buildings, High Street, Prestatyn.

MR. D. E. HARRINGTON [*A.*] is now architect to the firm of Messrs. Stiller, Cownie and Co., Salisbury House, London Wall, E.C.2, and would like all trade circulars and catalogues to be sent to this new address. (Tel.: Metropolitan 6064/7052.)

CHANGES OF ADDRESS

MR. HAROLD GEORGE ELLIS, B.Arch., A.R.I.B.A., has changed his address to 20 Hillbury Avenue, Kenton, Harrow.

MR. HARRY W. ROBERTS, author of *R's Method of Perspective*, has changed his address to 32 Pembridge Square, W.2.

A.B.S. Insurance Department

PENSION AND FAMILY PROVISION SCHEME FOR ARCHITECTS

This scheme has been formulated by the Insurance Committee of the Architects' Benevolent Society and is available to all members of the R.I.B.A. and its Allied and Associated Societies.

The benefits under the scheme include:—

(1) A Member's Pension, which may be effected for units of £50 per annum, payable monthly and commencing on attainment of the anniversary of entry nearest to age 65. This pension is guaranteed over a minimum period of five years and payable thereafter for the remainder of life.

(2) The Beneficiary's Pension, payable as from the anniversary mentioned in Benefit No. 1, but to the widow (or other nominated beneficiary) if the member dies before age 65. The amount of this pension is adjusted in accordance with the disparity between the ages of the member and his wife.

(3) Family Provision. Under this benefit a payment of £50 yearly is made to the dependent from the date of death of the member prior to age 65 until attainment of the anniversary previously mentioned, after which benefit No. 2 becomes available.

Provision can be made for any number of units (of £50 per annum) up to a maximum of £500 per annum.

Pension benefit only may be secured if desired and the pension commuted for a cash sum.

Members are entitled to claim rebate of Income Tax on their periodical contributions to the scheme both in respect of pension and of family provision benefit.

Full particulars of the scheme will be sent on application to the Secretary, A.B.S. Insurance Department, 66 Portland Place, W.1.

It is desired to point out that the opinions of writers of articles and letters which appear in the R.I.B.A. JOURNAL must be taken as the individual opinions of their authors and not as representative expressions of the Institute.

Members sending remittances by postal order for subscriptions or Institute publications are warned of the necessity of complying with Post Office Regulations with regard to this method of payment. Postal orders should be made payable to the Secretary R.I.B.A., and crossed.

R.I.B.A. JOURNAL

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